## CONTENTS

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Sections</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Admission, Selection and Migration</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>I. Eligibility Criteria</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>II. Selection of Students</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>III. Duration of the course</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>IV. Migration</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>V. Attendance requirement, Progress and conduct</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>VI. Subject of Study</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>VII. Examination</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>VIII. Qualification and experience to be eligible for examinership</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Goals and objectives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Goals</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Objectives</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Recommendations : General</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Recommendations : Specific</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Competencies</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Minimum working hours for each subject of study</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Recommended Books</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>Infrastructural, Functional &amp; Equipment Requirements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>General Facilities</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>General Hospital</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Dental Hospital</td>
<td>28</td>
</tr>
<tr>
<td>4</td>
<td>Equipment Requirements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Department : Oral Medicine and Radiology</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Department : Oral Pathology and Oral Microbiology</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Department : Public Health Dentistry</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Department : Paediatric and Preventive Dentistry</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Department : Orthodontics &amp; Dentofacial Orthopaedics</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Department : Periodontology</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Department : Conservative Dentistry and Endodontics</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Department : Oral &amp; Maxillofacial Surgery</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Department : Prosthodontics and Crown &amp; Bridge</td>
<td>35</td>
</tr>
<tr>
<td>5</td>
<td>Minimum basic qualification &amp; teaching experience required for teachers for undergraduate dental studies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dental Staff</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Medical Staff</td>
<td>37</td>
</tr>
</tbody>
</table>
Staffing Pattern - Teaching & Non-Teaching Staff

- Minimum Staffing for UG Dental Studies for 50 Admissions
- Minimum Staffing for UG Dental Studies for 100 Admissions
- Medical Teaching Staff in a Dental College
- Other Staff Pattern for 50 Admissions
- Other Staff Pattern for 100 Admissions

7. Syllabus of Study

1. Human Anatomy, Embryology, Histology & Medical Genetics
2. Human Physiology & Biochemistry, Nutrition & Diabetics
3. Dental Anatomy, Embryology and Oral Histology
4. General Pathology & Microbiology
5. General and Dental Pharmacology and Therapeutics
6. Dental Materials
7. Pre Clinical Conservative Dentistry Laboratory Exercises
8. Oral Pathology & Oral Microbiology
9. General Medicine
10. General Surgery
11. Conservative Dentistry and Endodontics
12. Oral & Maxillofacial Surgery
14. Orthodontics & Dentofacial Orthopaedics
15. Paediatric & Preventive Dentistry
16. Public Health Dentistry
17. Periodontology
18. Prosthodontics and Crown & Bridge
19. Aesthetic Dentistry
20. Forensic Odontology
21. Oral Implantology
22. Behavioural Science
23. Ethics
PREFACE

BDS COURSE REGULATIONS
(As Modified upto 25.07.2007)


Sd/-
Maj. Gen. (Retd.) P.N. Awasthi,
Secretary,
Dental Council of India
DENTAL COUNCIL OF INDIA
NOTIFICATION
New Delhi, the 25th July, 2007

No.DE-22-2007.-In exercise of the powers conferred by Section 20 of the Dentists Act, 1948, the Dental Council of India with the previous sanction of the Central Government hereby makes the following Revised BDS Course Regulations :-

1. Short title and commencement.-(i) These Regulations may be called the Dental Council of India Revised BDS Course Regulations, 2007.

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

REGULATIONS FOR THE DEGREE OF BACHELOR OF DENTAL SURGERY, 2007
(Modified : 25-7-2007)

GENERAL: Universities awarding the degrees in Bachelor of Dental Surgery (BDS) and Master of Dental Surgery (MDS) shall establish independent Dental Faculty.

ADMISSION, SELECTION AND MIGRATION:-

1. Admission to the Dental Course – Eligibility Criteria:

No Candidate shall be allowed to be admitted to the Dental Curriculum of first Bachelor of Dental Surgery (BDS) Course until:

1. He/she shall complete the age of 17 years on or before 31st December, of the year of admission to the BDS course;

2. He/she has passed qualifying examination as under:-

a. The higher secondary examination or the Indian School Certificate Examination which is equivalent to 10+2 Higher Secondary Examination after a period of 12 years study, the last two years of study comprising of Physics, Chemistry, Biology and Mathematics or any other elective subjects with English at a level not less than the core course for English as prescribed by the National Council for Educational Research and Training after the introduction of the 10+2+3 years educational structure as recommended by the National Committee on education;
introduction of the 10+2+3 years educational structure as recommended by the National Committee on education;

Note: Where the course content is not as prescribed for 10+2 education structure of the National Committee, the candidate will have to undergo a period of one year pre-professional training before admission to the dental colleges;

or

c. The pre-professional/pre-medical examination with Physics, Chemistry and Biology, after passing either the higher secondary school examination, or the pre-university or an equivalent examination. The pre-professional/pre-medical examination shall include a practical test in Physics, Chemistry and Biology and also English as a compulsory subject;

or

d. The first year of the three years degree course of a recognized university, with Physics, Chemistry and Biology including a practical test in three subjects provided the examination is a "University Examination" and candidate has passed 10+2 with English at a level not less than a core course;

or

e. B.Sc examination of an Indian University, provided that he/she has passed the B.Sc examination with not less than two of the following subjects Physics, Chemistry, Biology (Botany, Zoology) and further that he/she has passed the earlier qualifying examination with the following subjects-Physics, Chemistry, Biology and English.

or

f. Any other examination which, in scope and standard is found to be equivalent to the intermediate science examination of an Indian University/Board, taking Physics, Chemistry and Biology including practical test in each of these subjects and English.

Note:

• Marks obtained in Mathematics are not to be considered for admission to BDS Course.
• After the 10-2 course is introduced, the integrated courses should be abolished.

I. Selection of Students: The selection of students to dental college shall be based solely on merit of the candidate and for determining merit, the following criteria shall be adopted uniformly throughout the country:

1. In states having only one Dental College and one university board/examining body conducting the qualifying examination, the marks obtained at such qualifying examination may be taken into consideration;

2. In states, having more than one university/board/examining body conducting the qualifying examination (or where there are more than one dental colleges under the administrative control of one authority), a competitive entrance examination should be held so as to achieve a uniform evaluation as there may be variation of standards at qualifying examinations conducted by different agencies;

3. Where there are more than one college in a state and only one university/board conducting the qualifying examination, then a joint selection board be constituted for all the colleges;

4. A competitive entrance examination is absolutely necessary in the cases of institutions of All India character;

5. Procedure for selection to BDS course shall be as follows:-

i. In case of admission on the basis of qualifying examination under clause (1) based on merit, candidate for admission to BDS course must have passed in the subjects of Physics, Chemistry, Biology & English individually and must have obtained a minimum of 50% marks taken together in Physics, Chemistry, and Biology at the qualifying examination. In respect of candidates belonging to Scheduled Castes, Scheduled Tribes or Other Backward Classes, the marks obtained in Physics, Chemistry and Biology taken together in qualifying examination be 40% instead of 50% as above and must have passing marks in English.
II. In case of admission on the basis of competitive entrance examination under clause (2) to (4) of this regulation, a candidate must have passed in the subjects of Physics, Chemistry, Biology and English individually and must have obtained a minimum of 50% marks taken together in Physics, Chemistry and Biology at the qualifying examination and in addition must have come in the merit list prepared as a result of such competitive entrance examination by securing not less than 50% marks in Physics, Chemistry and Biology taken together in the competitive examination. In respect of candidates belonging to Scheduled Castes, Scheduled Tribes or other categories notified by the Government the marks obtained in Physics, Chemistry and Biology taken together in qualifying examination and competitive entrance examination be 40% instead of 50% as stated above:

Provided that a candidate who has appeared in the qualifying examination the result of which has not been declared, he may be provisionally permitted to take up the competitive entrance examination and in case of selection for admission to the BDS course, he shall not be admitted to that course until he fulfils the eligibility criteria as per above regulations.

III. Duration of the Course:

The undergraduate dental training programme leading to BDS degree shall be of 5 years with 240 teaching days in each academic year. During this period, the student shall be required to have engaged in full time study at a dental college recognised or approved by the Dental Council of India.

IV. Migration:

1. Migration from one dental college to another is not a right of a student. However, migration of students from one dental college to another dental college in India may be considered by the Dental Council of India only in exceptional cases on extreme compassionate grounds, provided the following criteria are fulfilled. Routine migrations on other ground shall not be allowed.

2. Both the colleges, i.e. one at which the student is studying at present and one to which migration is sought, are recognised by the Dental Council of India.

3. The applicant candidate should have passed first professional BDS examination.

4. The applicant candidate submits his application for migration, complete in all respects, to all authorities concerned within a period of one month of passing (declaration of results) the first professional Bachelor of Dental Surgery (BDS) examination.

5. The applicant candidate must submit an affidavit stating that he/she will pursue 240 days of prescribed study before appearing at 1st professional Bachelor of Dental Surgery (BDS) examination at the transfer dental college, which should be duly certified by the Registrar of the concerned University in which he/she is seeking transfer. The transfer will be applicable only after receipt of the affidavit.

Note 1:

(i) Migration is permitted only in the beginning of 2nd year BDS Course in recognised institutions.

(ii) All applications for migration shall be referred to Dental Council of India by the college authorities. No Institution/University shall allow migration directly without the prior approval of the Council.

(iii) Council reserves the right not to entertain any application which is not under the prescribed compassionate grounds and also to take independent decisions where applicant has been allowed to migrate without referring the same to the Council.

Note 2: Compassionate ground criteria:

(i) Death of supporting guardian.

(ii) Disturbed conditions as declared by Government in the Dental College area.

V. Attendance requirement, Progress and Conduct

(i) 75% in theory and 75% in practical/clinical in each year.

(ii) In case of a subject in which there is no examination at the end of the academic year/semester, the percentage of attendance shall not be less than 70%. However, at the
VI. Subjects of Study:

First Year
i) General Human Anatomy including Embryology and Histology
ii) General Human Physiology and Biochemistry, Nutrition and Dietics
iii) Dental Anatomy, Embryology and Oral Histology
iv) Dental Materials
v) Pre-clinical Prosthodontics and Crown & Bridge

Second Year
i) General Pathology and Microbiology
ii) General and Dental Pharmacology and Therapeutics
iii) Dental Materials
iv) Pre-clinical Conservative Dentistry
v) Pre-clinical Prosthodontics and Crown & Bridge
vi) Oral Pathology & Oral Microbiology

Third Year
i) General Medicine
ii) General Surgery
iii) Oral Pathology and Oral Microbiology
iv) Conservative Dentistry and Endodontics
v) Oral & Maxillofacial Surgery
vi) Oral Medicine and Radiology
vii) Orthodontics & Dentofacial Orthopaedics
viii) Paediatric & Preventive Dentistry
ix) Periodontology
x) Prosthodontics and Crown & Bridge

Fourth Year
i) Orthodontics & dentofacial orthopaedics
ii) Oral Medicine & Radiology
iii) Paediatric & Preventive Dentistry
iv) Periodontology
v) Oral & Maxillofacial Surgery
vi) Prosthodontics and Crown & Bridge
vii) Conservative Dentistry and Endodontics
viii) Public Health Dentistry

Fifth Year
i) Oral & Maxillofacial Surgery
ii) Prosthodontics and Crown & Bridge
iii) Conservative Dentistry and Endodontics
iv) Public Health Dentistry

EXAMINATIONS

SCOPE: These regulations shall be applicable for the B.D.S. degree examinations conducted by various universities in the country.

I. PREFACE:

(A) Evaluation is a continuous process and is based on criteria developed by the concerned authorities with certain objectives to assess the performance of the learner. This also indirectly helps in the measurement of effectiveness and quality of the concerned B.D.S. programme.

(B) Evaluation is achieved by two processes
1. Formative or internal assessment
2. Summative or university examinations.

Formative evaluation is done through a series of tests and examinations conducted periodically by the institution.

Summative evaluation is done by the university through examinations conducted at the end of the specified course.

II. METHODS OF EVALUATION:

Evaluation may be achieved by the following tested methods:
1. Written test
2. Practicals
3. Clinical examination
4. Viva voce

INTERNAL ASSESSMENT EXAMINATION

The continuing assessment examinations may be held frequently at least 3 times in a given academic year and the average marks of these examinations should be considered. Ten percent of the total marks in each subject separately for theory and practical/clinical examination separately should be set aside for the internal assessment examinations.

SCHEME OF EXAMINATION:
The scheme of examination for B.D.S. Course shall be divided into 1st B.D.S. examination at the end of the first academic year, 2nd B.D.S. examination at the end of second year, 3rd B.D.S. examination at the end of third, 4th BDS at the end of 4th and final B.D.S at the end of 5th year. 240 days minimum teaching in each academic year is mandatory.

The examination shall be open to a candidate who satisfies the requirements of attendance, progress and other rules laid down by the University.

(1) Universities shall organise admission timings and the admission process in such a way that teaching starts from the 1st day of August in each academic year.

I. B.D.S. Examination:
1. General anatomy including Embryology and histology
2. General human physiology and biochemistry
3. Dental Anatomy, Embryology and Oral Histology

Any student who does not clear the first BDS University Examination in all subjects within 3 years from the date of admission, shall be discharged from the course.

Any candidate who fails in one subject in an Examination is permitted to go to the next higher class and appear for the subject and complete it successfully before he is permitted to appear for the next higher examination.

II. B.D.S. Examination:
A candidate who has not successfully completed the 1st B.D.S. examination can not appear in the IInd year Examination.
1. General pathology and Microbiology
2. General and dental pharmacology and therapeutics
3. Dental Materials
4. Pre Clinical Conservative – Only Practical and Viva Voce
5. Pre Clinical Prosthodontics – Only Practical and Viva Voce

III. B.D.S. Examination:
A candidate who has successfully completed the 2nd B.D.S. examination can appear in the IIIrd B.D.S. Examination.
1. Generall Medicine
2. General Surgery
3. Oral Pathology and Oral Microbiology

IV. B.D.S. Examination:
1. Oral Medicine and radiology
2. Paediatric & Preventive Dentistry
3. Orthodontics & dentofacial orthopaedics
4. Periodontology

V BDS Examination:
1. Prosthodontics and Crown & Bridge
2. Conservative Dentistry and Endodontics
3. Oral and Maxillofacial Surgery
4. Public Health Dentistry

WRITTEN EXAMINATION:
1. The written examination in each subject shall consist of one paper of three hours duration and shall have a maximum of 70 marks.
2. In the subjects of Physiology & Biochemistry and Pathology & Microbiology each paper will be divided into two parts, A and B of equal marks.
3. The question paper should contain different types of questions such as essays, short answer and objective type / M.C.Q’s.
4. The nature of questions set, should be aimed to evaluate students of different standards, ranging from average to excellent.
5. The questions should cover as broad an area of the content of the course. The essay questions should be properly structured and the marks specifically allotted.
6. The University may set up a question bank

PRACTICAL AND CLINICAL EXAMINATION:
1. **Objective Structured Clinical Evaluation:** The present system of conducting practical and clinical examination at several universities provide chance for unrealistic proportion of luck. Only a particular clinical procedure or experiment is usually given for the examination. The clinical and practical examination should provide a number of chances for the candidate to express one’s skills. A number of examination stations with specific instructions should be provided. This can include clinical procedures, laboratory experiments, spotter etc. Evaluation must be made objective and structured. The method of objective structured clinical examinations should be followed. This will avoid examiner bias because both the examiner and the examinee are given specific instructions on what is to be observed at each station.

2. **Records / Log Books:** The candidate should be given credit for his records based on the scores obtained in the record. The marks obtained for the record in the first appearance can be carried over to the subsequent appearances if necessary.

3. **Scheme of clinical and practical examinations:** The specific scheme of clinical and practical examinations, the type of clinical procedures/ experiments to be performed and marks allotted for each are to be discussed and finalised by the Chairman and other examiners and it is to be published prior to the conduct of the examinations along with the publication of the time table for the practical examinations. This scheme should be brought to the notice of the external examiner as and when the examiner reports. The practical and clinical examinations should be evaluated by two examiners of which one shall be an external examiner appointed from other universities preferably outside the State. Each candidate should be evaluated by each examiner independently and marks computed at the end of the examination.

4. **Viva Voce:** Viva voce is an excellent mode of assessment because it permits a fairly broad coverage and it can assess the problem solving capacity of the student. An assessment related to the affective domain is also possible through viva voce. It is desirable to conduct the viva voce independently by each examiner. In order to avoid vagueness and to maintain uniformity of standard and coverage, questions can be pre-formulated before administering them to each student. Twenty marks are exclusively allotted for viva voce and that can be divided equally amongst the examiners, i.e., 10 marks per examiner.

**MARKS DISTRIBUTION IN EACH SUBJECT:**

<table>
<thead>
<tr>
<th></th>
<th>Theory</th>
<th>Practical / Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Theory – 100

<table>
<thead>
<tr>
<th>Component</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>University written exam</td>
<td>70</td>
</tr>
<tr>
<td>Viva Voce</td>
<td>20</td>
</tr>
<tr>
<td>Internal assessment (Written)</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Practicals/ clinicals – 100

<table>
<thead>
<tr>
<th>Component</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Exam</td>
<td>90</td>
</tr>
<tr>
<td>Internal assessment (Written)</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Practical and Viva Voce Only in University Examination**

- Pre-clinical Prosthodontics
- Pre-clinical Conservative Dentistry
- Internal Assessment – 20
- Practical – 60
- Viva Voce – 20
- **Total** – 100

**Criteria for a pass:**

Fifty percent of the total marks in any subject computed as aggregate for theory, i.e., written, viva voce and internal assessment and practicals including internal assessment, separately is essential for a pass in all years of study.

For declaration of pass in a subject, a candidate shall secure 50% marks in the University examination both in Theory and Practical/ Clinical examinations separately, as stipulated below:

- A candidate shall secure 50% marks in aggregate in University theory including Viva Voce and internal assessment obtained in University written examination combined together.
- In the University Practical/ clinical examination, a candidate shall secure 50% of University practical marks and internal Assessment combined together.
- In cases of pre-clinical Prosthetic Dentistry and Pre-clinical conservative dentistry in BDS, where there is no written examination, minimum for pass is 50% of marks in Practical and Viva voce combined together in University examination including Internal Assessment i.e. 50/100 marks.
- Successful candidates who obtain 65% of the total marks or more shall be declared to have passed the examination in First Class. Other successful candidates will be placed in Second Class. A candidate who obtains 75% and above is eligible for Distinction. Only those candidates who pass the whole examination in the first attempt will be eligible for distinction or class.
- First Class and Distinction etc. to be awarded by the University as per their respective rules.

**Grace Marks:** Grace marks up to a maximum of 5 marks may be awarded to students who have failed only in one subject but passed in all other subjects.

**Re-evaluation:** The objective of re-evaluation is to ensure that the student receives a fair evaluation in the university examination and to minimise human error and extenuating circumstances. There shall be two mechanisms for this purpose.

1. **Re-totalling:** The University on application and remittance of a stipulated fee to be prescribed by the university, shall permit a recounting or opportunity to recount the marks received for various questions in an answer paper/ papers for theory of all subjects for which the candidate has appeared in the university examination. Any error in addition of the marks awarded if identified should be suitably rectified.

2. **Re-evaluation:** Re-evaluation of theory papers in all years of study of the BDS course may be permissible by the university on application and remittance of a prescribed fee. Such answer scripts shall be re-evaluated by not less than two duly qualified examiners and the average obtained shall be awarded to the candidate and the result accordingly reconsidered. However in those universities where double evaluation provision exists, this provision of re-evaluation will not be applicable.
Qualification and experience for eligibility for examinership in BDS examination

1. M.D.S. Degree from a recognised Institution
2. Four years teaching experience in the subject in a dental college after MDS
3. Should be holding the post of a Reader or above in a Dental Institution approved/recognised by the Dental Council of India for B.D.S.

Note:
1. In case of Public Health Dentistry, as there is an acute shortage of teachers one examiner from Public Health Dentistry and the second from Periodontics is permissible. To be reviewed after three years.
2. In case of Physiology and Biochemistry if Internal examiner is from Physiology, External examiner should be from Biochemistry or vice versa.
3. In case of Pathology and Microbiology if Internal examiner is from Pathology, External examiner should be from Microbiology or vice versa.
4. In case of Dental Materials, if internal is from Prosthodontics, external should be from Conservative Dentistry and vice versa.

Fifty percent of Examiners appointed shall be external from Dental Institutions approved/recognised by the Dental Council of India for B.D.S. Course, from another University, preferably outside the State.

Reciprocal arrangement of Examiners should be discouraged, in that, the Internal Examiner in a subject should not accept external examinership for a College from which External Examiner is appointed in his subject for the corresponding period.

No person shall be an External Examiner to the same University for more than 3 consecutive years. However, if there is a break of one year the person can be re-appointed.

"Minimum Physical Requirement and Minimum Staffing Pattern (as per DCI Regulations 2006)."

GOALS AND OBJECTIVES

The dental graduates during training in the institutions should acquire adequate knowledge, necessary skills and reasonable attitudes which are required for carrying out all activities appropriate to general dental practice involving prevention, diagnosis and treatment of anomalies and diseases of the teeth, mouth, jaws and associated tissues. The graduate also should understand the concept of community oral health education and be able to participate in the rural health care delivery programmes existing in the country.

OBJECTIVES:
The objectives are dealt under three headings (a) Knowledge and Understanding (b) Skills and (c) Attitudes.

(A) KNOWLEDGE AND UNDERSTANDING:
The graduate should acquire the following during the period of training.

1. Adequate knowledge of the scientific foundations on which dentistry is based and good understanding of various relevant scientific methods, principles of biological functions; ability to evaluate and analyse scientifically various established facts and data.
2. Adequate knowledge of the development, structure and function of the teeth, mouth and jaws and associated tissues both in health and disease and their relationship and effect on general state of health and also bearing on physical and social well being of the patient.
3. Adequate knowledge of clinical disciplines and methods which provide a coherent picture of anomalies, lesions and diseases of the teeth, mouth and jaws and preventive diagnostic and therapeutic aspects of dentistry.
5. Adequate knowledge of the constitution, biological function and behaviour of persons in health and sickness as well as the influence of the natural and social environment on the state of health in so far as it affect dentistry.

(B) SKILLS:
A graduate should be able to demonstrate the following skills necessary for practice of dentistry:
1. Diagnose and manage various common dental problems encountered in general dental practice keeping in mind the expectations and the right of the society to receive the best possible treatment available wherever possible.
2. Prevent and manage complications if encountered while carrying out various surgical and other procedures.
3. Carry out certain investigative procedures and ability to interpret laboratory findings.
4. Promote oral health and help prevent oral diseases where possible.
5. Control pain and anxiety among the patients during dental treatment.

(C) ATTITUDES:
A graduate should develop during the training period the following attitudes:
1. Willingness to apply the current knowledge of dentistry in the best interest of the patient and community.
2. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.
3. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.
4. Willingness to participate in the CPED Programmes to update knowledge and professional skill from time to time.
5. Help and participate in the implementation of the national oral health policy.

RECOMMENDATIONS

1. The undergraduate course involves organisation of teaching programmes year-wise. However, this course, as a whole, should demonstrate integration of the basic sciences, clinical dentistry and practical or the laboratory skills. The course should be designed and integrated in such a way to permit smooth progression from the pre-clinical to clinical phase. Collaboration should be encouraged between teachers of basic sciences, dental sciences and clinical subjects.

2. The undergraduate dental course consists of three main components. The first component consists subjects common to medicine and dentistry like anatomy, physiology, biochemistry and behavioural science, leading to pharmacology, pathology, microbiology and then on to general medicine and general surgery. The second component runs concurrently with the first and deals with special aspects of oral and dental tissues, oral biology and oral pathology. Finally, the third component based on the foundations of the first two, deals with the clinical and technical aspects of dentistry as is required for general dental practice.

3. The first component of the course is intended to provide initially, an appreciation of normal human structure, development, function and behaviour, leading to understanding of the diseases, its prevention and treatment. The main objective is to provide the student a broad knowledge of the normal structures and functions of the body, the alterations which take place in disease with particular reference to those conditions in which medical and dental co-operation is essential for proper management. At this stage, the student should also be made aware of the social and psychological aspects of patient care with special reference to the relationship between dentist and patient. The behavioural sciences including both sociology and psychology should be introduced at the initial stages of the training programme, much before the students actually deal with the patients.

4. The second component of dental undergraduate programme consists instruction in the subjects dealing with dental and oral aspects to ensure a detailed knowledge of the structure and function of the dental and oral tissues. This enables the student to diagnose, prevent and treat the dental and oral diseases and disorders which were not included in the first component. The subject of oral biology is to be introduced at this level to provide the students a comprehensive knowledge and application of oral
physiology, microbiology, biochemistry and oral immunology. Students should be exposed to the basic aspects of forensic odontology at this stage of the course along with oral biology/oral pathology.

5. The third component of the course comprising the clinical and technical aspects of dentistry actually prepares the student to undertake total oral and dental health care of the patients of all ages. The emphasis at this stage should be on the prevention of various dental diseases and how to preserve natural teeth with their supporting structures. The importance of the various preventive methods need to be stressed. The significance of diagnosis of various dental and oral problems needs to be emphasised along with treatment planning before actual treatment procedures are undertaken.

In addition to acquiring knowledge, the students need to gain adequate clinical hands-on-experience in extractions and other minor oral surgical procedures, all aspects of conservative dentistry, endodontics, crown and bridge, provision of partial and complete dentures, various periodontal therapeutic procedures and use of removable orthodontic appliances. Familiarity with various radiological techniques, particularly intra-oral methods and proper interpretation of radiographs is an essential part of this component of training and has application in clinical diagnosis, forensic identification and age estimation.

Towards the final stage of the clinical training, each student should be involved in comprehensive oral health care or holistic approach to enable them to plan and treat patients as a whole, instead of piece-meal treatment provided in each specialty. The Dental Council of India strongly recommends that all the dental colleges provide facilities and required infrastructure for this purpose.

The aim of the undergraduate programme should undoubtedly be to produce a graduate, competent in general dental practice.

6. The commitment towards society as a whole needs to be stressed along with the knowledge and treatment skills gained. Instruction in public health dentistry should emphasise the sociological aspects of health care, particularly oral health care, including the reasons for the variation in oral and dental needs of different sections of the society. It is important to know the influence of the social, behavioural, environmental and economic factors on oral and dental health. Students should be made aware of the National oral health Policy and the importance of being a member of the Health care team delivering medical and oral health care, particularly among the rural population.

7. Scientific advancement of any profession is based largely on continuous research activities. Dentistry is no exception. It is important that in every dental college proper facilities should be provided for research and the faculty members should involve themselves in such activities. Inter-disciplinary research should be encouraged to bring in integration among various specialties. The teaching and training methodology should be such that the students are motivated to think and indulge in self-study rather than playing a passive role. Provision should be made in the daily schedules for adequate time for reading. Proper library facilities with adequate timings and seating capacity should be made available in all dental colleges. Adequate audio visual aids, like video tapes, computer assisted learning aids, Medline and internet facilities should be provided in all dental colleges to encourage self-study. Students should be encouraged to participate in simple research project work and the system of electives, spending some stipulated amount of time in another dental college within the country or outside should be given a serious consideration by all the dental institutions.

8. The society has a right to expect high standards and quality of treatment. Hence, it is mandatory and a social obligation for each dental surgeon to upgrade his or her knowledge and professional skills from time to time. The Dental Council of India strongly recommends that facilities and proper infrastructure should be developed to conduct the continuous professional education programmes in dentistry to enable the practitioners to update their knowledge and skills. The Council is of the opinion that the dental colleges by virtue of their infrastructural facilities will be ideal to conduct such courses and recommends establishment of a Department of continual dental education in each of the dental colleges. In addition, the practitioners should be encouraged to attend
conferences at the state and national level, workshops, seminars and any other such activity which the Council feels is suitable to upgrade the knowledge and skills.

9. The undergraduate curriculum should stress the significance of infection control in dental practice. Aspects like sources of infection, measures to be adopted - both general and specific - for control particularly the HIV and hepatitis should be properly incorporated into the curriculum so that the graduates are aware of its significance and follow it in their practice.

10. Information technology has touched every aspect of an individual's personal and professional life. The Council hence recommends that all undergraduates acquire minimum computer proficiency which will enable them to enhance their professional knowledge and skills.

RECOMMENDATIONS

SPECIFIC:

1. The undergraduate dental training programme leading to B.D.S. degree shall be a minimum of five years duration. During this period, the students shall be required to engage in full time study at a dental college recognised or approved by the Dental Council of India.

During the five years undergraduate course, the instruction in clinical subjects should be at least for three years.

2. Basic Medical & Dental Subjects:

The basic medical and dental sciences comprise anatomy gross and microscopic, physiology, biochemistry, pharmacology, oral biology and science of dental materials. Subjects like behavioural sciences, which is useful to develop communication skills, should also be introduced in the first year itself and spread over the undergraduate course. An introduction to Public Health Dentistry & Preventive Dentistry also will be useful to develop the concept of commitment to community. The laboratory skills to be developed by the students like pre-clinical, Prosthodontics, Crown Bridge, Aesthetic Dentistry and Oral Implantology exercises and studying dental morphology also is a part of initial training. The instruction in the above medical and dental sciences shall be for two years duration. At the end of this period the student should be in a position to understand and comprehend in general the development, structure and function of the human body in both health and disease.

3. The instruction in basic dental sciences should include theoretical and practical aspects of oral anatomy and physiology, to provide a detailed knowledge of the form and structure of teeth, associated tissues and occlusal relationships.

The study should also aim at development of a concept regarding physiological and biochemical processes relevant to oral cavity for better understanding of the changes which occur with the onset of disease in the oral cavity.

The student should be made aware of the importance of various dental tissues in forensic investigation.

4. Clinical, Medical and Dental subjects:

The students should be introduced to clinics in the initial stage, preferably in the first year, as an observer to familiarise with the clinical set-up and working. The period of instruction in the clinical subjects shall be not less than three years full time. During this period, the student shall attend a dental hospital, general hospital, community camps and satellite clinics, in order to obtain instruction and experience in the practice of dentistry. The main objective of training in clinical dental subjects is to produce a graduate able and competent to recognise or diagnose various dental and oral diseases, undertake general dental treatment, advise on the provision of specialised treatment available and finally advise the patient on prevention. The student should also understand the relationship between oral and systemic diseases.

5. Training in general medicine and surgery should provide sufficient knowledge on human disease to enable the student to understand its manifestations as relevant to the practice
of dentistry. This requires clinical teaching on patients and shall be carried out in inpatient and outpatient medical departments and specialist clinics.

This clinical instruction should enable the student to understand and perhaps diagnose common systemic diseases which have relevance to dental practice, by adopting a systematic approach of history taking and clinical examination. The student should also realise the significance of various general and special investigations in the diagnosis of diseases. The ability to recognise physical and mental illnesses, dealing with emergencies, effective communication with patients, interaction with various professional colleagues also become important aspects of this training.

6. The Dental Council of India considers it important for all dental students to receive instruction in first-aid and principles of cardio-pulmonary resuscitation. It is also desirable that the student spend time in an accident and emergency department of a general hospital.

7. The purpose of the clinical training is to provide sufficient practical skill in all aspects of clinical dentistry. The instruction should also include patient management skills, treatment of patients of all ages with special reference to children (paediatric), very elderly (geriatric), medically compromised and disabled patients.

8. During the three years clinical course, the students should receive thorough instruction which involves history taking, diagnosis and treatment planning in all aspects of dentistry and on graduation should be competent to carry out all routine general procedures.

In Oral & Maxillofacial Surgery and Oral Implantology, instruction should include the knowledge of various maxillofacial problems like injuries, infections and deformities of the jaws and associated structures. The clinical experience should include those procedures commonly undertaken in general practice like extraction of teeth, minor oral surgical procedure etc.

In Conservative, Endodontics & Aesthetic Dentistry, Prosthodontics, Crown Bridge, Aesthetic Dentistry and Oral Implantology and Periodontology and Oral Implantology students on graduation should be competent to carry out routine treatment like restorations of various kinds, endodontic procedures, removable and fixed prosthodontics, concept of osseointegration and finally various kinds of periodontal therapy. In addition, students should be aware of their limitations on graduation, need to refer patients for consultant opinion and/or treatment and also the need for postgraduate and continual education programmes.

In Orthodontics & Dento Facial Orthopedics, students should carry out simple appliance therapy for patients. Students should also be able to appreciate the role of dentofacial growth in the development and treatment of malocclusion.

In Paediatric dentistry, the students should concentrate on clinical management, efficacy of preventive measures, treatment needs particularly for children with disabilities. In oral medicine and oral diagnosis, the student should receive instruction in various lesions occurring in the oral cavity with particular reference to oral cancer.

9. The successful control and management of pain is an integral part of dental practice. Upon graduation the students should be competent to administer all forms of local anaesthesia. The value of behavioural methods of anxiety management should be emphasised. The students should also have the practical experience in the administration of intra-muscular and intra-venous injections. Knowledge of pain mechanisms and strategies to control post-operative pain is essential for practice of dentistry.

10. All students should receive instructions and gain practical experience in taking processing and interpretation of various types of intra and extra oral radiographs. They should be aware of the hazards of radiation and proper protective measures from radiation for the patient, operator and other staff.

11. Instruction should be given in dental jurisprudence, legal and ethical obligations of dental practitioners and the constitution and functions of Dental Council of India.
12. Infection and cross-infection control assume significance in dental practice. The students should be made aware of the potential risk of transmission in the dental surgery, various infectious diseases particularly HIV and hepatitis. The students should be aware of their professional responsibility for the protection of the patients, themselves and their staff and the requirements of the health and safety regulations.

13. In recent times, the subjects of aesthetic dentistry, oral implantology, behavioural sciences and forensic odontology have assumed great significance. Hence, the Council recommends that these four specialities should be incorporated into the undergraduate curriculum. The instruction and clinical training in aesthetic dentistry shall be carried out by the departments of Conservative, Endodontics & Aesthetic Dentistry and prosthodontics, Crown Bridge, Aesthetic Dentistry and Oral Implantology. Similarly, the instruction and clinical training in oral implantology shall be done by the departments of Oral & Maxillofacial Surgery, Prosthodontics, Crown Bridge, Aesthetic Dentistry and Oral Implantology and Periodontology and Oral Implantology. The instruction in behavioural sciences should ideally commence before the students come in contact with the patients and shall be carried out by the departments of Public Health Dentistry & Preventive Dentistry and Paedodontics & Preventive Dentistry. Forensic Odontology will be a part of Oral Pathology & Oral Microbiology and Oral Medicine and Radiology.

COMPETENCIES

At the completion of the undergraduate training programme the graduates shall be competent in the following:

General Skills
- Apply knowledge & skills in day to day practice
- Apply principles of ethics
- Analyse the outcome of treatment
- Evaluate the scientific literature and information to decide the treatment
- Participate and involve in professional bodies
- Self assessment & willingness to update the knowledge & skills from time to time
- Involvement in simple research projects
- Minimum computer proficiency to enhance knowledge and skills
- Refer patients for consultation and specialised treatment
- Basic study of forensic odontology and geriatric dental problems

Practice Management
- Evaluate practice location, population dynamics & reimbursement mechanism
- Co-ordinate & supervise the activities of allied dental health personnel
- Maintain all records
- Implement & monitor infection control and environmental safety programs
- Practice within the scope of one’s competence

Communication & Community Resources
- Assess patients’ goals, values and concerns to establish rapport and guide patient care
- Able to communicate freely, orally and in writing with all concerned
- Participate in improving the oral health of the individuals through community activities.

Patient Care – Diagnosis
- Obtaining patient’s history in a methodical way
- Performing thorough clinical examination
- Selection and interpretation of clinical, radiological and other diagnostic information
- Obtaining appropriate consultation
- Arriving at provisional, differential and final diagnosis

Patient Care – Treatment Planning
- Integrate multiple disciplines into an individual comprehensive sequence treatment plan using diagnostic and prognostic information
- Ability to order appropriate investigations
Patient Care - Treatment

- Recognition and initial management of medical emergencies that may occur during dental treatment
- Perform basic cardiac life support
- Management of pain including post operative
- Administration of all forms of local anaesthesia
- Administration of intra muscular and venous injections
- Prescription of drugs, pre operative, prophylactic and therapeutic requirements
- Uncomplicated extraction of teeth
- Transalveolar extraction and removal of simple impacted teeth
- Minor oral surgical procedures
- Management of oro-facial infections
- Simple orthodontic appliance therapy
- Taking, processing and interpretation of various types of intra oral radiographs
- Various kinds of restorative procedures using different materials available
- Simple endodontic procedures
- Removable and fixed prosthodontics
- Various kinds of periodontal therapy

ORAL MEDICINE & RADIOLOGY

- Able to identify precancerous and cancerous lesions of the oral cavity and refer to the concerned speciality for their management
- Should have an adequate knowledge about common laboratory investigations and interpretation of their results
- Should have adequate knowledge about medical complications that can arise while treating systematically compromised patients and take prior precautions/ consent from the concerned medical specialist
- Have adequate knowledge about radiation health hazards, radiation safety and protection
- Competent to take intra-oral radiographs and interpret the radiographic findings
- Gain adequate knowledge of various extra-oral radiographic procedures, TMJ radiography and sialography
- Be aware of the importance of intra- and extra-oral radiographs in forensic identification and age estimation
- Should be familiar with jurisprudence, ethics and understand the significance of dental records with respect to law

PAEDIATRIC & PREVENTIVE DENTISTRY

- Able to instil a positive attitude and behaviour in children towards oral health and understand the principles of prevention and preventive dentistry right from birth to adolescence
- Able to guide and counsel the guardian/parents with regard to various treatment modalities including different facets of preventive dentistry
- Able to treat dental diseases occurring in the child patient
- Able to manage physically and mentally challenged/ disabled children effectively and efficiently, tailored to the needs of individual requirement and conditions

ORTHODONTICS & DENTOFACIAL ORTHOPAEDICS

- Understand about normal growth and development of facial skeleton and dentition
- Pinpoint aberrations in growth process both dental and skeletal and plan necessary treatment
- Diagnose the various categories of malocclusion
- Able to motivate and explain to the patient (and parent or guardian) about the necessity of treatment
- Plan and execute preventive orthodontics (space maintainers or space regainers)
- Plan and execute interceptive orthodontics (habit breaking appliances)
- Manage treatment of simple malocclusion such as anterior spacing using removable appliances
- Handle delivery and activation of removable orthodontic appliances
Diagnose and appropriately refer patients with complex malocclusion to the specialist

PERIODONTOLOGY
- Diagnose the patient's periodontal problem, plan and perform appropriate periodontal treatment.
- Competent to educate and motivate the patient.
- Competent to perform thorough oral prophylaxis, subgingival scaling, root planning and minor periodontal surgical procedures.
- Give proper post treatment instructions and do periodic recall and evaluation.
- Familiar with concepts of osseointegration and basic surgical aspects of implantology.

PROSTHODONTICS AND CROWN & BRIDGE
- Able to understand and use various dental materials.
- Competent to carry out treatment of conventional complete and partial removable dentures and fabricate fixed partial dentures.
- Able to carry out treatment of routine prosthodontic procedures.
- Familiar with the concept of osseointegration and the value of implant-supported Prostodontic procedures.

CONSERVATIVE DENTISTRY AND ENDODONTICS
- Competent to diagnose all carious lesions.
- Competent to perform Class I and Class II cavities and their restoration with amalgam.
- Restore Class V and Class III cavities with glass ionomer cement.
- Able to diagnose and appropriately treat pulpectomically involved teeth (pulp capping procedures).
- Able to perform RCT for anterior teeth.
- Competent to carry out small composite restorations.
- Understand the principles of aesthetic dental procedures.

ORAL & MAXilloFACIAL SURGERY
- Able to apply the knowledge gained in the basic medical and clinical subjects in the management of patients with surgical problems.
- Able to diagnose, manage and treat patients with basic oral surgical problems.
- Have a broad knowledge of maxillofacial surgery and oral implantology.
- Should be familiar with legal, ethical and moral issues pertaining to the patient care and communication skills.
- Should have acquired the skill to examine any patient with an oral surgical problem in an orderly manner.
- Understand and practice the basic principles of asepsis and sterilisation.
- Should be competent in the extraction of the teeth under both local and general anaesthesia.
- Competent to carry out certain minor oral surgical procedure under LA like trans-crestal extraction, frenectomy, dento alveolar procedures, simple impaction, biopsy, etc.
- Competent to assess, prevent and manage common complications that arise during and after minor oral surgery.
- Able to provide primary care and manage medical emergencies in the dental office.
- Familiar with the management of major oral surgical problems and principles involved in in-patient management.

PUBLIC HEALTH DENTISTRY
- Apply the principles of health promotion and disease prevention.
- Have knowledge of the organisation and provision of health care in community and in the hospital service.
- Have knowledge of the prevalence of common dental conditions in India.
- Have knowledge of community based preventive measures.
- Have knowledge of the social, cultural and environmental factors which contribute to health or illness.
- Administer oral hygiene instructions, topical fluoride therapy and fissure sealing.
- Educate patients about the aetiology and prevention of oral disease and encourage them to assume responsibility for their oral health.
### MINIMUM WORKING HOURS FOR EACH SUBJECT OF STUDY (B.D.S COURSE)

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Lecture Hours</th>
<th>Practical Hours</th>
<th>Clinical Hours</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Human Anatomy Including Embryology</td>
<td>100</td>
<td>175</td>
<td></td>
<td>275</td>
</tr>
<tr>
<td>Osteology and Histology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Human Physiology</td>
<td>120</td>
<td>60</td>
<td></td>
<td>180</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>70</td>
<td>60</td>
<td></td>
<td>130</td>
</tr>
<tr>
<td>Dental Materials</td>
<td>80</td>
<td>240</td>
<td></td>
<td>320</td>
</tr>
<tr>
<td>Dental Anatomy Embryology, and Oral Histology</td>
<td>105</td>
<td>250</td>
<td></td>
<td>355</td>
</tr>
<tr>
<td>Dental Pharmacology &amp; Therapeutics</td>
<td>70</td>
<td>20</td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>General Pathology</td>
<td>55</td>
<td>55</td>
<td></td>
<td>110</td>
</tr>
<tr>
<td>Microbiology</td>
<td>65</td>
<td>50</td>
<td></td>
<td>115</td>
</tr>
<tr>
<td>General Medicine</td>
<td>60</td>
<td></td>
<td>9</td>
<td>150</td>
</tr>
<tr>
<td>General Surgery</td>
<td>60</td>
<td></td>
<td>90</td>
<td>150</td>
</tr>
<tr>
<td>Oral Pathology &amp; Microbiology</td>
<td>145</td>
<td>130</td>
<td></td>
<td>275</td>
</tr>
<tr>
<td>Oral Medicine &amp; Radiology</td>
<td>65</td>
<td>200</td>
<td></td>
<td>265</td>
</tr>
<tr>
<td>Paediatric &amp; Preventive Dentistry</td>
<td>65</td>
<td>200</td>
<td></td>
<td>265</td>
</tr>
<tr>
<td>Orthodontics &amp; dental orthopaedics</td>
<td>50</td>
<td>200</td>
<td></td>
<td>250</td>
</tr>
<tr>
<td>Periodontology</td>
<td>80</td>
<td>200</td>
<td></td>
<td>280</td>
</tr>
<tr>
<td>Oral &amp; Maxillofacial Surgery</td>
<td>70</td>
<td>360</td>
<td></td>
<td>430</td>
</tr>
<tr>
<td>Conservative Dentistry &amp; Endodontics</td>
<td>135</td>
<td>200</td>
<td></td>
<td>460</td>
</tr>
<tr>
<td>Prosthodontics &amp; Crown &amp; Bridge</td>
<td>135</td>
<td>300</td>
<td></td>
<td>795</td>
</tr>
<tr>
<td>Public Health Dentistry</td>
<td>60</td>
<td>290</td>
<td></td>
<td>350</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1590</strong></td>
<td><strong>1540</strong></td>
<td><strong>2390</strong></td>
<td><strong>5080</strong></td>
</tr>
</tbody>
</table>

*Note:* There should be a minimum of 240 teaching days every academic year consisting of 8 working hours including one hour of lunch break.

### MINIMUM WORKING HOURS FOR EACH SUBJECT OF STUDY (B.D.S COURSE)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lecture Hours</th>
<th>Practical Hours</th>
<th>Clinical Hours</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Human Anatomy Including Embryology</td>
<td>100</td>
<td>175</td>
<td></td>
<td>275</td>
</tr>
<tr>
<td>Osteology and Histology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Human Physiology</td>
<td>120</td>
<td>60</td>
<td></td>
<td>180</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>70</td>
<td>60</td>
<td></td>
<td>130</td>
</tr>
<tr>
<td>Dental Anatomy Embryology, and Oral Histology</td>
<td>105</td>
<td>250</td>
<td></td>
<td>355</td>
</tr>
<tr>
<td>Dental Materials</td>
<td>20</td>
<td>40</td>
<td></td>
<td>60</td>
</tr>
<tr>
<td>Pre clinical Prosthodontics &amp; Crown &amp; Bridge</td>
<td></td>
<td>100</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>415</strong></td>
<td><strong>685</strong></td>
<td><strong>1100</strong></td>
<td><strong>1100</strong></td>
</tr>
</tbody>
</table>

II B.D.S

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lecture Hours</th>
<th>Practical Hours</th>
<th>Clinical Hours</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General &amp; Dental Pharmacology and</td>
<td>70</td>
<td>20</td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>Therapeutics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Pathology</td>
<td>55</td>
<td>55</td>
<td></td>
<td>110</td>
</tr>
<tr>
<td>Microbiology</td>
<td>65</td>
<td>50</td>
<td></td>
<td>115</td>
</tr>
</tbody>
</table>
### PART III - SEC. 4

#### III B.D.S.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lecture Hours</th>
<th>Practical Hours</th>
<th>Clinical Hours</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Medicine</td>
<td>60</td>
<td>90</td>
<td></td>
<td>150</td>
</tr>
<tr>
<td>General Surgery</td>
<td>60</td>
<td>90</td>
<td></td>
<td>150</td>
</tr>
<tr>
<td>Oral Pathology and Oral Microbiology</td>
<td>120</td>
<td>80</td>
<td></td>
<td>200</td>
</tr>
<tr>
<td>Oral Medicine and Radiology</td>
<td>20</td>
<td>70</td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>Paediatric and Preventive Dentistry</td>
<td>20</td>
<td>70</td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>Orthodontics &amp; Dentofacial Orthopaedics</td>
<td>20</td>
<td>70</td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>Periodontology</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Oral &amp; Maxillofacial Surgery</td>
<td>20</td>
<td>70</td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>Conservative Dentistry &amp; Endodontics</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Prostodontics and Crown &amp; Bridge</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>410</strong></td>
<td><strong>750</strong></td>
<td></td>
<td><strong>1160</strong></td>
</tr>
</tbody>
</table>

#### IV B.D.S.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lecture Hours</th>
<th>Practical Hours</th>
<th>Clinical Hours</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Medicine and Radiology</td>
<td>45</td>
<td>130</td>
<td></td>
<td>175</td>
</tr>
<tr>
<td>Paediatric and Preventive Dentistry</td>
<td>45</td>
<td>130</td>
<td></td>
<td>175</td>
</tr>
<tr>
<td>Orthodontics &amp; Dentofacial Orthopaedics</td>
<td>30</td>
<td>130</td>
<td></td>
<td>166</td>
</tr>
<tr>
<td>Periodontology</td>
<td>50</td>
<td>130</td>
<td></td>
<td>180</td>
</tr>
<tr>
<td>Oral &amp; Maxillofacial Surgery</td>
<td>30</td>
<td>90</td>
<td></td>
<td>110</td>
</tr>
<tr>
<td>Conservative Dentistry &amp; Endodontics</td>
<td>30</td>
<td>90</td>
<td></td>
<td>120</td>
</tr>
<tr>
<td>Prostodontics and Crown &amp; Bridge</td>
<td>30</td>
<td>90</td>
<td></td>
<td>120</td>
</tr>
<tr>
<td>Public Health Dentistry</td>
<td>30</td>
<td>90</td>
<td></td>
<td>120</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>280</strong></td>
<td><strong>880</strong></td>
<td></td>
<td><strong>1160</strong></td>
</tr>
</tbody>
</table>

#### V B.D.S.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lecture Hours</th>
<th>Practical Hours</th>
<th>Clinical Hours</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral &amp; Maxillofacial Surgery</td>
<td>30</td>
<td>200</td>
<td></td>
<td>230</td>
</tr>
<tr>
<td>Conservative Dentistry &amp; Endodontics</td>
<td>50</td>
<td>300</td>
<td></td>
<td>350</td>
</tr>
<tr>
<td>Prostodontics and Crown &amp; Bridge</td>
<td>50</td>
<td>300</td>
<td></td>
<td>350</td>
</tr>
<tr>
<td>Public Health Dentistry</td>
<td>30</td>
<td>200</td>
<td></td>
<td>230</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>160</strong></td>
<td><strong>1000</strong></td>
<td></td>
<td><strong>1160</strong></td>
</tr>
</tbody>
</table>

**Note:**
- Behavioural Sciences Classes shall commence in 1st Year.
- Forensic Odontology shall be covered in the department of Oral Pathology and Oral Medicine during 3rd Year.
- Aesthetic Dentistry shall be covered in the Departments of Conservative Dentistry and Prosthodontics during 4th & 5th Year.
- Oral Implantology shall be covered in the Department of Maxillofacial Surgery, Prosthodontics & Crown & Bridge and Periodontology during 4th & 5th Years.
- Ethics and dental jurisprudence shall be covered in Public Health Dentistry in 4th and 5th years.
- Electives / Research work should be encouraged during the 5th Year lasting for a period of at least one month to be spent in a different dental institution in India / overseas.
All the institutions shall compulsorily make arrangements for Comprehensive oral health care training for at least 3 months during 5th Year. The Department of Public Health Dentistry may be utilised in case the institution does not have a separate Department for this purpose. Qualified faculty members from the departments of Prosthodontics, Conservative Dentistry and Periodontics should guide the students along with faculty of Public Health Dentistry Department.

The minimum working hours indicated each year of study does not include one month mid year vacation and one month of university examination.

**RECOMMENDED BOOKS**

1. **Human Anatomy, Embryology, Histology & Medical Genetics**
   - Snell (Richard S.) Clinical Anatomy for Medical Students, Ed. 5, Litttle Brown & company, Boston.
   - Wheater, Burkit & Daniels, Functional Histology, Ed. 2, Churchill Livingston.
   - Sadler, Langman’s, Medical Embryology, Ed. 6.
   - James & Anderson, Grant’s Atlas of Anatomy, Williams & Wilkins.
   - Williams, Gray’s Anatomy, Ed.38, Churchill Livingston.
   - Emery, Medical Genetics.

2. **Physiology**
   - Garang; Review of Medical Physiology, 19th edition
   - Vander; Human physiology, 5th edition
   - Choudhary; Concise Medical Physiology, 2nd edition
   - Chaurjee; Human Physiology, 19th edition
   - A.K. Jain; Human Physiology for BDS Students, 1st edition
   - Berne & Levy; Physiology, 2nd edition
   - West-Best & Taylor’s, Physiological basis of Medical Practise, 11th edition

**EXPERIMENTAL PHYSIOLOGY:**
1. Rangan; Practical Physiology, 4th edition
2. Ghai; a text book of practical physiology
3. Hutchinson’s; Clinical Methods, 20th edition

3. **Biochemistry**
   - Lecture notes in Biochemistry 1984, J.K. Kandiah

**REFERENCE BOOKS:**
3. Basic and applied Dental Biochemistry, 1979, R.A.D. Williams & J.C. Elliot

4. **Dental Anatomy, Embryology and Oral Histology**
   - Orban’s Oral Histology & Embryology - S.N. Bhaskar
   - Oral Development & Histology – James & Avery
   - Wheeler’s Dental Anatomy, Physiology & Occlusion - Major M. Ash
   - Applied Physiology of the mouth - Lavelle
   - Physiology & Biochemistry of the mouth - Jenkins

5. **General Pathology**
   - Robbins – Pathologic Basis of Disease Cotran, Kumar, Robbins
   - Anderson’s Pathology Vol 1 & 2 Editors – Ivan Damjanov & James Linder
   - Wintrobe’s clinical Haematolog Lee, Bittell, Poerter, Athens, Lukens

6. **Microbiology**
7. Immunology an Introduction – Tizard

7. Dental Materials
   2. Restorative Dental Materials - 10 edn. Robert G. Craig

8. General and dental pharmacology and therapeutics

9. General Medicine
   Textbook of Medicine Davidson
   Textbook of Medicine Hutchinson

10. General Surgery
    Short practice of Surgery – Baily & Love

11. Oral Pathology & Oral Microbiology
    1. A Text Book of Oral Pathology Shafer, Hine & Levy
    3. Oral Pathology Soames & Southam.
    4. Oral Pathology in the Tropics Prabhu, Wilson, Johnson & Daftary

12. Public Health Dentistry
    1. Dentistry Dental Practice and Community by David F. Striffler and Brian A. Burt, Edu. –1983, W. B. Saunders Company
    12. Community Dentistry by Soben Peter.
13. Pediatric and Preventive Dentistry
   1. Pediatric Dentistry (Infancy through Adolescence) – Pinkham.
   4. Handbook of Clinical Pedodontics – Kenneth D.
   5. Dentistry for the Child and Adolescence – McDonald.
   6. Pediatric Dentistry – Dumble S. G.
   7. Behaviour Management – Wright
   8. Traumatic Injuries – Andreason.

   a) Oral Diagnosis, Oral Medicine & Oral Pathology
      2. Essentials of Oral Diagnosis – Mosby Year Book
      5. Kerr – Oral Diagnosis
      6. Miller – Oral Diagnosis & Treatment
      7. Hutchinson – clinical Methods
      8. Oral Pathology – Shafer
   b) Oral Radiology
      1. White & Goaz – Oral Radiology – Mosby year Book
      2. Weirman – Dental Radiology – C.V. Mosby Company
   c) Forensic Odontology

15. Orthodontics and Dentofacial Orthopedics
   1. Contemporary Orthodontics William E. Proffit
   2. Orthodontics For Dental Students – White and Gardner
   3. Handbook Of Orthodontics Movers
   4. Orthodontics - Principles and Practice Graber
   5. Design, Construction and Use Of Removable Orthodontic Appliances C. Philip Adams
   6. Clinical Orthodontics: Vol 1 & 2 Salzmann

16. Oral and Maxillofacial Surgery
   1. Impacted teeth; Alling John F & et al.
   2. Principles of oral and maxillofacial surgery; Vol.1,2 & 3 Peterson LJ & et al.
   3. Handbook of medical emergencies in the dental office, Malamed SF.
   4. Killey’s Fractures of the mandible; Banks P.
   5. Killey’s fractures of the middle 3rd of the facial skeleton; Banks P.
   6. Killey and Kaye outline of oral surgery – Part 1; Seward GR & et al
   7. Essentials of safe dentistry for the medically compromised patients; Mc Carthy FM
   8. Extraction of teeth; Howe GL
   9. Minor Oral Surgery; Howe GL

17. Prosthodontics, Crown & Bridge
   2. Boucher’s "Prosthodontic treatment for edentulous patients"
   5. McCracken’s Removable partial prosthodontics

18. Periodontology
   1. Glickman’s Clinical Periodontology – Carranza
REFERENCE BOOKS:
1. Essentials of Periodontology and Periodontics – Torquill MacPhce
2. Contemporary Periodontics – Cohen
3. Periodontal therapy – Goldman
4. Orbans’ Periodontics – Orban
5. Oral Health Survey – W.H.O.
6. Preventive Periodontics – Young and Stifler
7. Public Health Dentistry – Slack
8. Advanced Periodontal Disease – John Prichard
9. Preventive Dentistry – Forrest
10. Clinical Periodontology – Jan Lindhe

19. Conservative Dentistry and Endodontics
1. Esthetic guidelines for restorative dentistry; Scharer & others
2. Esthetics of anterior fixed prosthodontics; Chiche (G)J & Pinault (Alain)
3. Esthetic & the treatment of facial form, Vol 28; Mc Namara (JA)

20. Aesthetic Dentistry
1. Aesthetic guidelines for restorative dentistry; Scharer & others
2. Aesthetics of anterior fixed prosthodontics; Chiche (G)J & Pinault (Alain)
3. Aesthetic & the treatment of facial form, Vol 28; Mc Namara (JA)

21. Forensic Odontology
1. Practical Forensic odontology – Derek Clark

22. Oral Implantology
2. Osseointegration and Occlusal Rehabilitation Hobe S., Ichida, E. and Garcia L.T.

23. Behavioural Science
1. General psychology -- Hans Raj, Bhatia
2. Behavioural Sciences in Medical practice -- Manju Mehta

24. Ethics

Note:
1. Book titles will keep on adding in view of the latest advances in the Dental Sciences.
2. Standard books from Indian authors are also recommended.

LIST OF JOURNALS:
1. Journal of Dentistry
2. British Dental Journal
3. International Dental Journal
4. Dental Abstracts
5. Journal of American Dental Association
7. Oral Surgery, Oral Pathology and Oral Medicine
8. Journal of Periodontology
9. Journal of Endodontics
10. American journal of Orthodontics and Dentofacial Orthopedics
11. Journal of Prosthetic Dentistry
13. Endodontics and Dental Traumatology
14. Journal of Dental Education
15. Dental Update
16. Journal of Dental Material

Note: This is the minimum requirement. More journals both Indian and Foreign are recommended for imparting research oriented education.
INFRASTRUCTURE & FUNCTIONAL REQUIREMENTS
50 ADMISSIONS

General Facilities:

   consisting of -
   (a) Dean's room
   (b) Administrative officer's room
   (c) Meeting room
   (d) Office
   (e) Office stores
   (f) Pantry etc.

2. Library: 4500 sq.ft.
   consisting of -
   (a) Reception & waiting
   (b) Property counter
   (c) Issue counter
   (d) Photocopying area
   (e) Reading room to accommodate 50% of total students strength
   (f) Postgraduates & staff reading room
   (g) Journal room
   (h) Audio-visual room
   (i) Chief librarian room
   (j) Stores and stocking area.

3. Lecture halls - 4: 3200 sq.ft.
   Each hall to accommodate 10% more of admission strength with proper seating arrangement, blackboard, microphone and facilities for slide, overhead and multi-media projection.

   With proper storing facilities like racks and refrigerator, preferably compact storage systems.

5. Maintenance room: 600 sq.ft.
   Equipped with proper facilities to maintain and repair dental chairs and units and various other equipments in the college and hospital.

   With proper studio facilities for clinical photography, developing, preparation of slides, charts, models etc.

7. Medical stores: 200 sq.ft.
   Stocked with all the necessary drugs usually prescribed in a dental hospital.

   (a) Boys' and Girls' locker rooms
   (b) Boys' and Girls' common rooms
   (c) Common room for non-teaching staff
   (d) Common room for teaching staff
   (e) Change room for men
   (f) Change room for women

   Adequate to accommodate required capacity compressors, gas cylinders etc.

10. Pollution control measures:
    All the dental institutions shall take adequate pollution control measures by providing ventilation plant, sewage water treatment plant, landscaping of the campus etc.

    With accommodation for 100 people with kitchen, stores, washing area etc.

A separate hall for university and other examination furnishes with chairs and individual tables to accommodate 125 students at a time.

13. Hostels:
The hostel accommodation shall be provided based on number of admissions for all the boys and girls in the Dental College campus itself. The accommodation may be increased in a phased manner over a period of 4 years.

14. Staff quarters:
All the staff members, teaching and non-teaching working in the institution shall be provided adequate accommodation in the 5 acres land earmarked for the college. The staff quarters may be built in a phased manner over a period of 4 years.

15. Play ground:
There shall be facilities for both indoor and out-door games in the premises.

17. Auditorium:
Should accommodate at least 400 people and consisting of proper seating arrangements, reception counter, green rooms, lobby, fitted with sound system, slide and multimedia presentation facility.

18. Laboratories:

I. Dental subjects:
   (a) Pre-clinical Prosthodontics and dental material lab – 1500 sq.ft.
   (b) Pre-clinical conservative lab – 1300 sq.ft.
   (c) Oral biology and oral pathology lab – 1300 sq.ft.
   (d) Laboratory for orthodontics and paedodontics – 800 sq.ft.

II. Medical subjects: (only for independent dental colleges): 4500 sq.ft.
   (a) Anatomy dissection hall with storage for cadavers, osteology, demonstration room etc. Area–1500 sq.ft.
   (b) One laboratory for physiology and pathology and microbiology with stores and preparation rooms for individual subjects attached to it. Area–1500 sq.ft.
   (c) Laboratory for biochemistry and pharmacology with store and preparation rooms separately for both subjects. Area–1500 sq.ft.

III. Clinical:
   (a) Prosthodontics–Plaster room
      Polymers room
      Wax room
      Casting laboratory
      Ceramic lab
      ... 1300 sq.ft.
   (b) Conservative Dentistry – Plaster room
      Casting & ceramic laboratories ... 300 sq.ft.
   (c) Oral pathology for histopathology ... 400 sq.ft.
   (d) Haematology and clinical biochemistry: a laboratory for routine blood and biochemical investigation and urine analysis ... 200 sq.ft.

16. Distilled Water Plant

100 ADMISSIONS

General:

1. Administrative block: 3000 sq.ft.
   consisting of –
   (a) Dean’s room
   (b) Administrative officer’s room
   (c) Meeting room
   (d) Office
   (e) Office stores
   (f) Pantry etc.

2. Library: 8000 sq.ft.
   consisting of –
(a) Reception & waiting, Property counter  
(b) Issue counter  
(c) Photocopying area  
(d) Reading room to accommodate 50% of total students' strength.  
(e) Postgraduates & staff reading room  
(f) Journal room  
(g) Audio-visual room  
(h) Chief librarian room  
(i) Stores and stocking area  
(j) E-Consortium provision to be provided in the College Library connected with the National Medical Library.

3. Lecture halls – 4  
Each hall to accommodate 10% more of admission strength with proper seating arrangement, blackboard, microphone and facilities for slide, overhead and multi-media projection.

4. Central store  
800 sq.ft.  
With proper storing facilities like racks and refrigerator, preferably compact storage systems.

5. Maintenance room  
1000 sq.ft.  
Equipped with proper facilities to maintain and repair dental chairs and units and various other equipments in the college and hospital.

6. Photography and artist room  
400 sq.ft.  
With proper studio facilities for clinical photography, developing, preparation of slides, charts, models etc.

7. Medical store  
300 sq.ft.  
Stocked with all the necessary drugs usually prescribed in a dental hospital.

8. Amenities area  
3200 sq.ft.  
(a) Boys' and Girls' locker rooms  
(b) Boys' and Girls' common rooms  
(c) Common room for non-teaching staff  
(d) Common room for teaching staff  
(e) Change room for men  
(f) Change room for women

9. Compressor and room for gas plant  
300 sq.ft.  
Adequate to accommodate required capacity compressors, gas cylinders etc.

10. Pollution control measures:  
All the dental institutions shall take adequate pollution control measures by providing incineration plant, sewage water treatment plant, landscaping of the campus etc.

11. Cafeteria  
1500 sq.ft.  
With accommodation for 100 people with kitchen, stores, washing area etc.

12. Examination hall  
3600 sq.ft.  
A separate hall for university and other examination furnished with chairs and individual tables to accommodate 250 students at a time.

13. Hostels:  
Hostel accommodation shall be provided for all boys and girls based on number of admissions in the Dental College campus itself. The accommodation may be increased in a phased manner over a period of 4 years.

14. Staff quarters:  
All the staff members, teaching and non-teaching working in the institution shall be provided adequate accommodation in the 5 acres land earmarked for the college. The staff quarters may be built in a phased manner over a period of 4 years.

15. Play ground:  
There shall be facilities for both indoor and out-door games in the premises.

16. Auditorium:
Should accommodate at least 500 people and consisting of – proper seating arrangements, reception counter, green rooms, lobby, fitted with sound system, slide and multimedia presentation facility.

17. Laboratories:
   I. Dental subjects:
      (a) Pre-clinical Prosthodontics and dental material lab - 3000 sq.ft.
      (b) Pre clinical conservative lab - 2500 sq.ft.
      (c) Oral biology and oral pathology lab - 2500 sq.ft.
      (d) Laboratory for orthodontics and paedodontics - 1500 sq.ft.

   II. Medical subjects: (only for independent dental colleges) 7500 sq.ft.
      (a) Anatomy dissection hall with storage for cadavers, osteology, demonstration room etc. Area - 3500 sq.ft.
      (b) One laboratory for physiology and pathology and microbiology with stores and preparation rooms for individual subjects attached to it. Area - 2500 sq.ft.
      (c) Laboratory for biochemistry and pharmacology with store and preparation rooms separately for both subjects - 2500 sq.ft.

   III. Clinical:
      (a) Prosthodontics - Plaster room
         - Polymer room
         - Wax room
         - Casting laboratory
         - Ceramic lab .... 2500 sq.ft.
      (b) Conservative Dentistry - Plaster room
         - Casting & ceramic laboratories .... 600 sq.ft.
      (c) Oral pathology for histopathology .... 600 sq.ft.
      (d) Haematology and clinical biochemistry: a laboratory for routine blood and biochemical investigation and urine analysis ... 300 sq.ft.

18. Distilled Water Plant

TEACHING AIDS:

Audiovisual – Adequate number of overhead projectors and slide projectors shall be provided in the lecture halls and seminar rooms attached to various departments. It is also desirable to have an LCD or DLP projector for multimedia presentations.

Computers – The administrative area, clinics, stores and library shall be provided with computers & printers preferably interconnected for better co-ordination.

General Hospital:

The applicant owns and manages a General Hospital of not less than 100 beds as per DCI (Establishment of New Dental Colleges, Opening of New or Higher Course of Study or Training and Increase of Admission Capacity in Dental Colleges) Regulations, 2006 with necessary infrastructure facilities including teaching pre-clinical, para-clinical and allied medical sciences in the campus of the proposed dental college, or

The proposed dental college is located in the proximity of a Government Medical College or a Medical College recognised by the Medical Council of India and an undertaking of the said Medical College to the effect that it would facilitate training of the students of the proposed dental college in the subjects of Medicine, Surgery and Allied Medical Sciences has been obtained, or

Where no Medical College is available in the proximity of the proposed dental college, the proposed dental college gets itself tied up at least for 5 years with a Government General Hospital having a provision of at least 100 beds and located within a radius of 10 K.M. of the proposed dental college and the tie-up is extendable till it has its own 100 bedded hospital in the same premises. In such cases, the applicant shall produce evidence that necessary infrastructure facilities including teaching pre-clinical, para-clinical and allied medical sciences are owned by the proposed dental college itself.
A 100 bedded teaching hospital should have a definite outpatient departments, in-patient services and 24 hours emergency and critical care services. It should have a medical programme as under:

I. MEDICAL PROGRAMME
   A) Medical & Allied Disciplines
      - General Medicine
      - General Surgery
      - Obstetrics and Gynaecology
      - Orthopaedics
      - Critical Medicine
      - Emergency Medicine
      - Otorhinolaryngology
      - Paediatrics
      - Pathology
      - Anaesthesiology
      - Blood Bank & Transfusion
      - Community Medicine
      - Hospital Administration

   B) Nursing, Paramedical, Technical and Allied Services
      - Dietetics and Therapeutics
      - Drugs & Pharmacy
      - ECG Technology
      - Imaging Technology
      - Central Sterile Supply department
      - Physiotherapy
      - Medical Record Sections

   C) Engineering & Allied Services
      - Fire protection
      - Electrical
      - Air conditioning/Central heating
      - Medical Gases
      - Refrigeration
      - Central Workshop
      - Ambulance Service
      - Water Supply
      - Sewage Treatment/Disposal and waste disposal cell

   D) Administration and Ancillary Services
      - General Administration
      - Material Management
      - Medical Social Worker
      - PRG
      - Library
      - Security

II. FUNCTIONAL PROGRAMME
   A) Site
      Site should be within 10 k.m. radius of the teaching block of Dental College - a site with high degree of sensitivity to outside noise should not be present. It should be accessible by transport and building should be well ventilated.

   B) Category wise Bed Distribution
      1. General Ward - Medical including allied specialities
         - 30 beds
      2. General Ward - Surgical including allied specialities
         - 30 beds
      3. Private Ward (A/C & Non A/C)
         - 9 beds
      4. Maternity Ward
         - 15 beds
      5. Pediatric Ward
         - 6 beds
The intensive care services for medical/surgical intensive care with bed complement of 4 beds (4% of bed strength).

The critical care services for medical/surgical emergencies with bed complement of 6 beds (6% of bed strength).

**III. AREA REQUIREMENTS (AS PER BUREAU OF INDIAN STANDARDS)**
- Covered area requirement is 20 sq. m. / bed
  - Out of the total covered area
  - 40% inpatient services
  - 35% outpatient services
  - 25% department and supportive services

**IV. MANPOWER REQUIREMENTS**
The consultants in the various departments should have at least 8 years teaching experience after post graduation.

**MEDICAL STAFF**
- General Surgery  - 2
- General Medicine  - 2
- Obstetrics & Gynaecology  - 2
- ENT  - 2
- Paediatrics  - 2
- Anaesthesia  - 2
- Orthopaedics  - 2
- Pharmacologist  - 1
- Radiologist  - 1
- G. DMO  - 1
- Community Medicine  - 1
- Hospital Administration  - 1

**NURSING STAFF**
- Matron  - 1
- Sister in-charge  - 6
- O. T. Nurses  - 6
- General Nurses  - 20
- Labour Room Nurses  - 4

**HEALTH STAFF**
- Female Health Assistant  - 1
- Extension Educator  - 1
- Paramedical Staff  -
- Lab Technician/Blood Bank Tech.  - 4
- ECG Technician  - 1
- Pharmacist  - 4
- Sr. Radiographer  - 1
- CSSD  - 2
- Medical Records  - 1

**ENGINEERING STAFF**
- Civil  - 2
- Mechanical  - 2
- Electrical  - 2
- Engineering aid  - 4

**OTHER STAFF**
- Drivers  - 2
- Carpenter  - 1
- Cooks  - 2
- Barber  - 1
- Class IV including chowkidars  - 55

**ADMINISTRATIVE STAFF**
- Office Superintendent  - 1
The intensive care services for medical/surgical intensive care with bed complement of 1 bed (4% of bed strength).

The critical care services for medical/surgical emergencies with bed complement of 1 bed (6% of bed strength).

III. AREA REQUIREMENTS (AS PER BUREAU OF INDIAN STANDARDS)
- Covered area requirement is 20 sq. m. / bed
  - Out of the total covered area
  - 40% inpatient services
  - 35% outpatient services
  - 25% department and supportive services

IV. MANPOWER REQUIREMENTS
The consultants in the various departments should have at least 8 years teaching experience after post graduation.

MEDICAL STAFF
- General Surgery - 2
- General Medicine - 2
- Obstetrics & Gynaecology - 2
- ENT - 2
- Paediatrics - 2
- Anesthesia - 2
- Orthopaedics - 2
- Pharmacology - 1
- Radiologist - 1
- G. DMO - 1
- Community Medicine - 1
- Hospital Administration - 1

NURSING STAFF
- Matron - 1
- Sister in-charge - 6
- O.T. Nurses - 6
- General Nurses - 20
- Labour Room Nurses - 4

HEALTH STAFF
- Female Health Assistant - 1
- Extension Educator - 1
- Paramedical Staff
- Lab Technician/Blood Bank Tech. - 4
- ECG Technician - 1
- Pharmacist - 4
- Sr. Radiographer - 1
- CSSD - 2
- Medical Records - 1

ENGINEERING STAFF
- Civil - 2
- Mechanical - 2
- Electrical - 2
- Engineering aid - 4

OTHER STAFF
- Drivers - 2
- Carpenter - 1
- Cooks - 2
- Barber - 1
- Class IV including chowkidars - 55

ADMINISTRATIVE STAFF
- Office Superintendent - 1
Satellite Dental Clinics:
All the dental colleges are encouraged to establish at least one to two satellite centres with all infrastructural facilities within 50 km distance to train and expose students in community health care programmes.

Dental Hospital:
The following are the clinical departments in a Dental College:
1. Oral Medicine and Radiology
2. Oral Pathology and Oral Microbiology
3. Public Health Dentistry
4. Pedodontics and Preventive Dentistry
5. Orthodontics & Dental Orthopaedics
6. Periodontology
7. Conservative Dentistry and Endodontics
8. Oral & Maxillofacial Surgery
9. Prosthodontics and Crown & Bridge

Out patients:
Since dentistry is a clinical oriented speciality, the Council desires that all the institutions make efforts to have adequate clinical material for satisfactory training of undergraduate students. There shall be at least 75 to 100 new patients on an average each day in colleges with admissions and 100 - 150 new patients in colleges with 100 admissions.

Each of the clinical departments should have the following functional areas:

50 Admissions:
(a) Reception and waiting room - 200 sq.ft.
(b) Undergraduate clinic adequate to accommodate the prescribed number of dental chairs and units.
(c) Sterilisation room (where central sterilisation facilities are not provided) - 150 sq.ft.
(d) Small department stores - 100 sq.ft.
(e) Seminar room - 200 sq.ft.

Staff rooms:
1. H.O.'s room - 180 sq.ft.
2. Readers' room - 150 sq.ft.
3. Lecturers' room - 250 sq.ft.

Note: Departments having postgraduate training should provide additional functional requirements as per MDS regulations.

Main reception and dental records section: 800 sq.ft.

100 Admissions:
(a) Reception and waiting room - 300 sq.ft.
(b) Undergraduate clinic adequate to accommodate the prescribed number of dental chairs and units.
(c) Sterilisation room (where central sterilisation facilities are not provided) - 200 sq.ft.
(d) Small department stores - 100 sq.ft.
(e) Seminar room - 400 sq.ft.

Staff rooms:
1. H.O.'s room - 180 sq.ft.
2. Readers' room - 150 sq.ft.
3. Lecturers' room - 300 sq.ft.

Note: Departments having postgraduate training should provide additional functional requirements as per MDS regulations.
| Lead Gloves | 1 | 1 |
| X-ray Hangers | 6 | 6 |
| X-ray Viewers | 2 | 2 |
| Diagnostic Kits | Mouth mirror, dental probe, college tweezers | 20 | 40 |
| Lead Scewces | 1 | 1 |
| Biopsy Kit | 1 | 1 |
| Autoclave | Having wet and dry cycle, which can achieve 135°C with minimum capacity of 20 liters | 1 | 2 |
| Computers | Minimum Pentium -IV | 1 | 1 |
| Intra Oral Camera | With High resolution | 1 | 1 |
| Needle Burner with Syringe Cutter | 2 | 2 |

**Department: ORAL PATHOLOGY AND ORAL MICROBIOLOGY**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SPECIFICATION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Chairs and Units</td>
<td>With shadowless lamp, spittoon, 3 way syringe, instrument tray and suction</td>
<td>1</td>
</tr>
<tr>
<td>Microscopes</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Microtome</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wax bath</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Water bath</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Knife sharpener</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Hot plate</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Spencer knife</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Department: PUBLIC HEALTH DENTISTRY**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SPECIFICATION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Chairs and Units</td>
<td>Electrically operated, Spitoon attachment, Halogen Light with 2 intensity, Air ventury suction, micromotor control light cure 3 way syringe, X-ray viewer, instrument tray Dental Operators stool with height adjustment</td>
<td>8</td>
</tr>
<tr>
<td>Autoclaves</td>
<td>Having wet and dry cycle, which can achieve 135°C with minimum capacity of 20 litres.</td>
<td>1</td>
</tr>
<tr>
<td>Ultrasonic cleaner</td>
<td>Minimum capacity 13 litres with mesh bucket with digital timer</td>
<td>1</td>
</tr>
<tr>
<td>Needle Burner with Syringe Cutter</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

**MOBILE CLINIC**

<p>| Mobile dental van | Mobile dental van with two dental chairs with all the attachments and adequate sitting space for 15 to 20 people |
| Dental chair with unit | Hydraulically operated with spitoon attachment, halogen light with 2 intensity, air ventury suction, airotor, micromotor, 3 way-scaler and light cure, x-ray viewer, instrument tray, operating stool. | 2 |</p>
<table>
<thead>
<tr>
<th>NAME</th>
<th>SPECIFICATION</th>
<th>QUANTITY 50</th>
<th>QUANTITY 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Chairs and Units</td>
<td>Electrically operated, Spittoon attachment, Halogen Light with 2 intensity, high power motorized evacuation system, Air rotor with miniature, Airrotor HP6, Micro motor with miniature contrangle Hand piece, 3 way syringe, ultrasonic scaler with 3 tips, Light cure unit LED based heat free, X-ray viewer, instrument tray Dental Operator's stool with height adjustment (Pedo chair preferred)</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Autoclaves</td>
<td>Having wet and dry cycle, which can achieve 135°C with minimum capacity of 20 liters.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Ultrasound cleaner</td>
<td>Minimum capacity 13 liters with mesh bucket with digital timer</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Needle Burner with syringe cutter</td>
<td>With torque control IIIPs</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Amalgamator</td>
<td>Projector for pedo</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pulp Tester-Digital</td>
<td>Apex locator</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Rubber dam kit for pedo</td>
<td>Rake motor</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Radioscopy</td>
<td>Digital intra X-ray system with pedo sensor and software</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Intra Oral Camera-</td>
<td>With high resolution</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Scalpel instruments</td>
<td>Restorative instruments</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Extraction forceps</td>
<td>Intra-oral X-ray</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Automatic Developer</td>
<td>Computer</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Plaster dispenser</td>
<td>PEDO LAB</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Mould Trimmer</td>
<td>With digital disc</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
### Orthodontics

<table>
<thead>
<tr>
<th>Name</th>
<th>Specification</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Chairs and Units</td>
<td>Electrically operated, Spittone attachment, Halogen Light with 2 intensity, Air ventury suction, micro motor control light cure 3 way syringe, X-ray viewer, instrument tray Dental Operators stool with height adjustment</td>
<td>6</td>
</tr>
<tr>
<td>Unit mount scaler</td>
<td>Having wet and dry cycle, which can achieve 139°C with minimum capacity of 26 liters</td>
<td>3</td>
</tr>
<tr>
<td>Autoclave</td>
<td>Minimum capacity 13 liters with mesh bucket with digital timer</td>
<td>1</td>
</tr>
</tbody>
</table>

### Ortho Lab

<table>
<thead>
<tr>
<th>Name</th>
<th>Specification</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaster dispenser</td>
<td>One each for plaster and stone plaster</td>
<td>2</td>
</tr>
<tr>
<td>Vibration</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Model Trimmer</td>
<td>heavy duty</td>
<td>1</td>
</tr>
<tr>
<td>Micromotor</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Lathe</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>X-ray viewers</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>OPG with cephalostat</td>
<td>If available in radiology its is adequate.</td>
<td>1</td>
</tr>
<tr>
<td>Welders</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Blue Torch</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Base Formers</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Typodont</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>set of Pliers</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Welder with soldering attachments</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Hydro solder</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Typhoidont articulator</td>
<td>With metal teeth wax rim of Class I, II, III</td>
<td>3</td>
</tr>
<tr>
<td>Pressure molding machine</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

### Periodontology

<table>
<thead>
<tr>
<th>Name</th>
<th>Specification</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Chairs and Units</td>
<td>Electrically operated, Spittone attachment, Halogen Light with 2 intensity, High power evacuation system, Air ventury succion, X-ray viewer, Air-ror, Micromotor with straight and contrangle Handpiece, With shadowless</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>34</td>
</tr>
</tbody>
</table>
### Department: Paediatric and Preventive Dentistry

<table>
<thead>
<tr>
<th>Name</th>
<th>Specification</th>
<th>Quantity 50 Adms.</th>
<th>Quantity 100 Adms.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Chairs and Units</td>
<td>Electrically operated, Spittoon attachment, Halogen Light with 2 intensity, high power motorized evacuation system, Air rotor with miniature, Air rotot HIP, Micro motor with miniature contrangle Hand piece, 3 way syringe, ultrasonic scaler with 3 tips, Light cure unit LED based heat free, X-ray viewer, instrument tray Dental Operator’s stool with height adjustment (Pedo chair preferre)</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Autoclaves</td>
<td>Having wet and dry cycle, which can achieve 135°C with minimum capacity of 20 liters.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Ultrasonic cleaner</td>
<td>Minimum capacity 13 liters with mesh bucket with digital timer</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Needle Burner with syringe cutter</td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Amalgamotor</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pulp Tester-Digital</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Rubber dam kit for pedo</td>
<td></td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Apex locator</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Endo motor</td>
<td>With torque control HIPs</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Injectable gutta percha with condensation</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Radiographic</td>
<td>Digital intra X-ray system with pedo sensor and software</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Intra Oral Camera</td>
<td>With high resolution</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Scaling instruments</td>
<td></td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Restorative instruments</td>
<td></td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Extraction forcps</td>
<td></td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Intra-oral X-ray</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Automatic Developer</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Computer</td>
<td>Minimum Pentium IV</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Plaster dispenser</td>
<td>One each for plaster and stone plaster</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Model Trimmer</td>
<td>With diamond disc</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**PEDO LAB**
| Model Trimmer | Double disc; one diamond and one | 1 | 1 |
| Welder with | | | |
| attachments | | | |
| Vibrator | | 2 | 2 |
| Lab micro motor | Heavy duty with Hps | 2 | 2 |
| Dental Lathe | | 1 | 1 |
| Model Trimmer | | 1 | 1 |
| Steam cleaner | | 1 | 1 |
| Pressure moulding machine | | 1 | 1 |
| Carboniudum Disc | | 1 | 1 |
| Diamond disc | | 1 | 1 |

**Department: ORTHODONTICS**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SPECIFICATION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Chairs and Units</td>
<td>Electrically operated, Spittten attachment, Halogen Light with 2 intensity, Air ventury suction, micromotor control light cure 3 way syringe, X-ray viewer, instrument tray Dental Operators stool with height adjustment.</td>
<td>9</td>
</tr>
<tr>
<td>Unit mount scaler</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Autoclave</td>
<td>Having wet and dry cycle, which can achieve 135°C with minimum capacity of 20 liters</td>
<td>1</td>
</tr>
<tr>
<td>Ultrasonic Cleaner</td>
<td>Minimum capacity 13 liters with mesh basket with digital timer</td>
<td>1</td>
</tr>
</tbody>
</table>

**ORTHO LAB**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SPECIFICATION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaster dispenser</td>
<td>One each for plaster and stone plaster</td>
<td>2</td>
</tr>
<tr>
<td>Vibrator</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Model Trimmer</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Micromotor –</td>
<td>heavy duty</td>
<td>2</td>
</tr>
<tr>
<td>Lathe</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>X-ray viewers</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>OPG with cephalostat</td>
<td>If available in radiology its is adequate.</td>
<td>1</td>
</tr>
<tr>
<td>Welders</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Blue Torch</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Base Formers</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Typodont</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Set of Pliers</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Welder with soldering attachments</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Hydro solder</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Typodont articulator</td>
<td>With metal teeth wax rim of Class I, II, III</td>
<td>3</td>
</tr>
<tr>
<td>Pressure moulding machine</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**Department: PERIODONTOLOGY**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SPECIFICATION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Chairs and Units</td>
<td>Electrically operated, Spittten attachment, Halogen Light with 2 intensity, high power evacuation system, Air ventury suction, X-ray viewer, Arrotor, Micromotor with straight and contriangle Handpiece, With shadowless</td>
<td>17</td>
</tr>
</tbody>
</table>
### Department: Conservative Dentistry and Endodontics

<table>
<thead>
<tr>
<th>NAME</th>
<th>Specification</th>
<th>QUANTITY 50</th>
<th>QUANTITY 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Chairs and Units</td>
<td>Electrically operated, Spouton attachment, Halogen Light with 2 intensity, high power evacuation system, Air ventury suction, X-ray viewer, Air motor, Micromotor with straight and contrangle Handpiece, With shadowless lamp, spouton, 3 way syringe, ultrasonic scaler with 3 tips, X-ray viewer, instrument tray denial operator's stool with height adjustment</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td>Rubber dam kits</td>
<td></td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Restorative instruments kits</td>
<td></td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>R.C.T. instrument kits</td>
<td></td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Autoclaves</td>
<td>Having wet and dry cycle, which can achieve 135°C with minimum capacity of 20 liters</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Ultrasonic cleaner</td>
<td>Minimum capacity 13 liters with mesh bucket</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Needle burner with syringe cutter</td>
<td>Soft tissue laser</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Surgical motor with physio dispenser</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Name</td>
<td>Specification</td>
<td>Quantity 500</td>
<td>Quantity 1000</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>---------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Dental Chairs and Units</td>
<td>Electrically operated, Spittoon attachment, Halogen Light with 2 intensity, Air ventury suction, X-ray viewer, 3 way syringe, instrument tray, Dental Operator’s stool and height adjustment and suction, Micromotor/ Airotor</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Autoclaves</td>
<td>Front loading having wet and dry cycle, which can achieve 135°C with minimum capacity of 20 litres</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Ultrasonic Cleaner</td>
<td>Minimum capacity 13 litres with mesh bucket</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Needle burner with syringe cutter</td>
<td></td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Extraction forceps sets</td>
<td>Complete set</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Dental elevators</td>
<td>Complete set</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Minor Oral surgery kits</td>
<td></td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Emergency drugs tray</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Oxygen cylinder with mask</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>X-ray viewers</td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Computer</td>
<td>Minimum Pentium IV</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
### B) MINOR SURGERY

**Dental Chairs and Units**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SPECIFICATION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Electrically operated, Spouton attachment, Halogen Light with 2 intensity, high power evacuation system, Air ventury suction, X-ray viewer, Arotor, Micromotor with straight and contra-angle Handpiece, 3- way syringe, instrument tray Dental Operator's stool and height adjustment and suction.</td>
<td>3</td>
</tr>
</tbody>
</table>

**Department: PROSTHODONTICS AND CROWN & BRIDGE**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SPECIFICATION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Chairs and Units</td>
<td>Electrically operated, Spouton attachment, Halogen Light with 2 intensity, high power evacuation system, Air ventury suction, X-ray viewer, Arotor, Micromotor with straight and contra-angle Handpiece, 3- way syringe, ultrasonic sealer with 3 tips, Light cure unit, instrument tray and suction, Dental operator stool with height adjustment</td>
<td>17</td>
</tr>
<tr>
<td>Semi- adjustable articulator</td>
<td>With face bow</td>
<td>2</td>
</tr>
<tr>
<td>Extra -oral/intra oral tracer</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Dewatering unit</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Curing unit</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dental casting machine</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Wax burnout furnace</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pre heating furnace</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Surveying unit</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Heavy duty hand piece</td>
<td>Lab micromotors</td>
<td>3-4</td>
</tr>
<tr>
<td>Autoclave</td>
<td>Having wet and dry cycle, which can achieve 135°C with minimum capacity of 20 litres</td>
<td>1</td>
</tr>
<tr>
<td>Needle burner with syringe cutter</td>
<td></td>
<td>1-2</td>
</tr>
<tr>
<td>Plaster Dispenser</td>
<td>One each for plaster and stone plaster</td>
<td>2</td>
</tr>
<tr>
<td>Model Trimmer with Carborandum Disc</td>
<td></td>
<td>1-1</td>
</tr>
<tr>
<td>Model Trimmer with Diamond Disc</td>
<td></td>
<td>1-2</td>
</tr>
<tr>
<td>Acryliciser</td>
<td></td>
<td>3-3</td>
</tr>
<tr>
<td>Lathe</td>
<td></td>
<td>1-2</td>
</tr>
<tr>
<td>Flask press</td>
<td></td>
<td>4-4</td>
</tr>
<tr>
<td>Deflasking unit</td>
<td></td>
<td>4-4</td>
</tr>
<tr>
<td>Devaxing unit</td>
<td></td>
<td>2-3</td>
</tr>
<tr>
<td>Hydraulic Press</td>
<td></td>
<td>2-3</td>
</tr>
<tr>
<td>Mechanical Press</td>
<td></td>
<td>1-2</td>
</tr>
<tr>
<td>Vacuum mixing machine</td>
<td></td>
<td>1-1</td>
</tr>
<tr>
<td>Lab Micro motor</td>
<td>With heavy duty handpiece</td>
<td>3-4</td>
</tr>
<tr>
<td>Curing pressure pot</td>
<td></td>
<td>1-1</td>
</tr>
</tbody>
</table>
### CERAMIC AND CAST PARTIAL LABORATORY

<table>
<thead>
<tr>
<th>NAME</th>
<th>SPECIFICATIONS</th>
<th>250</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaster Dispenser</td>
<td>One each for plaster and stone plaster</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Duplicator</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pindex System</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Circular saw</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Burn out furnace</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sand blasting machine</td>
<td>With two containers</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Electro polisher</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Model Trimmer with Carbide</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Model Trimmer with Diamond disc</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Induction casting machine</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Programmable porcelain furnace</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>furnace with vacuum pump with instrument</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>kit and material kit</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Spot welder with soldering,</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>attachment of cable</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Vacuum mixing machine</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Steam Cleaner</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Spindle Grinder 24,000 RPM with vacuum</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>suction</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wax heater</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wax carver</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Curved pressure pot</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Milling machine</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Heavy duty lathe with suction</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Preheating furnace</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Palatal trimmer</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ultrasonic cleaner</td>
<td>5 litres capacity</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Composite curing unit</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Micro survey</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>PRE-CLINICAL PROSTHETIC LABORATORY</td>
<td>Work table preferably complete stainless steel</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>fixed with light Bunsen burner, air blower, working</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>stool Adequate number of lab micro motor with</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>attached hand piece</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLASTER ROOM FOR PRE-CLINICAL WORK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plaster dispenser</td>
<td>One each for plaster and stone</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Vibrator</td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Lathe</td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
### MINOR SURGERY

<table>
<thead>
<tr>
<th>Dental Chairs and Units</th>
<th>Electrically operated, Spuiton attachment, Halogen Light with 2 intensity, high power evacuation system, Air ventury suction, X-ray viewer, Air rotor, Micromotor with straight and contra-angle Handpiece, 3 way syringe, instrumnent tray Dental Operator's stool and height adjustment and suction.</th>
<th>3</th>
<th>5</th>
</tr>
</thead>
</table>

**Department: PROSTHODONTICS AND CROWN & BRIDGE**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SPECIFICATION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Chairs and Units</td>
<td>Electrically operated, Spuiton attachment, Halogen Light with 2 intensity, high power evacuation system, Air ventury suction, X-ray viewer, Air rotor, Micromotor with straight and contra-angle Handpiece, 3 way syringe, instrumnent tray Dental Operator's stool and height adjustment and suction.</td>
<td>17</td>
</tr>
<tr>
<td>Semi-adjustable articulator</td>
<td>With face bow</td>
<td>2</td>
</tr>
<tr>
<td>Extra -oral/intra oral tracer</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Dewatering unit</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Curing unit</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Dental casting machine</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Wax burnout furnace</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pre heating furnace</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Surveying unit</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Heavy duty hand piece</td>
<td>Lab micromoters</td>
<td>3</td>
</tr>
<tr>
<td>Autoclave</td>
<td>Having wet and dry cycle, which can achieve 135°C with minimum capacity of 20 litres</td>
<td>1</td>
</tr>
<tr>
<td>Needle burner with syringe cutter</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Plaster Dispenser</td>
<td>One each for plaster and stone plaster</td>
<td>2</td>
</tr>
<tr>
<td>Model Trimmer with Carborandum Disc</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Model Trimmer with Diamond Disc</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Acrlyiser</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Lathe</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Plank press</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Deflasking unit</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Dewaxing unit</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Hydraulic Press</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Mechanical Press</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Vacuum mixing machine</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Lab Miero motor</td>
<td>With heavy duty handpiece</td>
<td>3</td>
</tr>
<tr>
<td>Curing pressure pot</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>NAME</td>
<td>SPECIFICATIONS</td>
<td>50 ADM</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Plaster Dispenser</td>
<td>One each for plaster and stone plaster</td>
<td>2</td>
</tr>
<tr>
<td>Duplicator</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pindex System</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Circular saw</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Burn out furnace</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sandblasting machine</td>
<td>With two containers</td>
<td>1</td>
</tr>
<tr>
<td>Electro-polisher</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Model Trimmer with</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Carborundum disc</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Model Trimmer with Diamond</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Induction casting machine</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Programmable porcelain</td>
<td>furnace with vacuum pump with instrument kit and</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>material kit</td>
<td></td>
</tr>
<tr>
<td>Spot welder with soldering</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>attachment of cable</td>
<td></td>
</tr>
<tr>
<td>Vacuum mixing machine</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Steam Cleaner</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Spindle Grinder 24,000 RPM</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>with vacuum suction</td>
<td></td>
</tr>
<tr>
<td>Wax heater</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Wax carver</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Curing pressure pot</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Milling machine</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Heavy duty lathe with suction</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Preheating furnace</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Palatal trimmer</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ultrasonic cleaner</td>
<td>5 litres capacity</td>
<td>1</td>
</tr>
<tr>
<td>Composite curing unit</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Micro surveyor</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>PRE-CLINICAL PROSTHETIC</td>
<td>Work table preferably complete stainless steel</td>
<td>30</td>
</tr>
<tr>
<td>LABORATORY</td>
<td>steel fitted with light, Bunsen burner, air blower,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>working stool</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adequate number of lab micro motor with attached</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>hand piece</td>
<td></td>
</tr>
<tr>
<td>PLASTER ROOM FOR PRE-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLINICAL WORK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plaster dispenser</td>
<td>One each for plaster and stone</td>
<td>2</td>
</tr>
<tr>
<td>Vibrator</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Lathe</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>