

***ALL INDIA INSTITUTE OF MEDICAL SCIENCES***

**KALYANI , WEST BENGAL**

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# ***Department of Dentistry***

## **PROPOSED COURSE –2**

### **DENTAL HYGIENIST COURSE**

- Diploma Course
- 02 Years Duration
- 05 Seats

**REGULATIONS FOR THE MAINTENANCE OF MINIMUM EDUCATIONAL  
STANDARD FOR DENTAL HYGIENISTS.**

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**Dental Hygienists Course:**

"Dental Hygienist" means a person, not being a' Dentist or a Medical Practitioner, who scales, cleans or polishes teeth, or gives instructions in dental hygiene. He shall work under the supervision of the Registered Dental Surgeon.

1. The course of studies should extend over a period of two academic years and lead to the qualification of Dental Hygienist Diploma.

2. A separate course shall be arranged for the training of Dental Hygienist.

**3. To achieve this:-**

- a) A candidate should be at least 17 years of age at the time of admission or within 3 months of it and should be medically fit to pursue the course.
- b) candidate must have passed 10+2 or two years intermediate or equivalent course thereof with Science subjects (i.e.) Physics, Chemistry and Biology from a recognized Indian University or Pre-University/Intermediate Board.
- c) The medium of instruction shall be in English.

**I. MINIMUM REQUIREMENTS FOR INSTITUTIONS IMPARTING TRAINING FOR DENTAL HYGIENISTS:**

1. The minimum hours devoted to the under mentioned 'subjects shall be as follows:

<b>Primary</b>	Subject	Lectures	Practicals / Demonstrations / Clinical	Total
<b>A.</b>	Anatomy, General and Dental	50	100	150
<b>B.</b>	Physiology & Histology, General and Dental	20	40	60
<b>C.</b>	Pharmacology General & Dental	15	10	25
<b>D.</b>	Pathology & Microbiology	30	70	100
<b>E.</b>	Dental Radiology	10	40	50
<b>F.</b>	Food and Nutrition	25	30	55
<b>G.</b>	Dental Hygiene and Oral Prophylaxis	50	280	330
<b>H.</b>	Basic knowledge of Computers	20	50	70
			<b>TOTAL=</b>	<b>840</b>

<b>FINAL</b>	Subject	Lectures	Practicals / Demonstrations / Clinical	Total
<b>A.</b>	Dental Hygiene and Oral Prophylaxis	25	350	375
<b>B.</b>	(i) Dental Health Education; (ii) Community Public Health Dentistry, (iii) Preventive Dentistry	50	200	250
<b>C.</b>	Dental Ethics and Jurisprudence; Orientation in Dentistry.	15	--	15
<b>D.</b>	Dental Materials	10	10	20
			<b>TOTAL =</b>	<b>660</b>

2. The classes in different subjects of the curriculum should be taught exclusively for this course.
3. There should be atleast one Instructor for every 10 students working in the clinics at any given time.
4. For the teaching of dental subjects no persons except those holding recognized dental Qualifications (BDS) , preferably master degree holder (MDS) shall be employed as Instructors.
5. The institutions imparting training in this course must possess of the following minimum requirements:—
  - a) One Histopathological laboratory equipped with as many number of microscopes as is required by half of the admission strength for demonstration purposes.
  - b) Atleast two class room, i.e, one each for 1st & 2nd year students, one of which must be equipped with a LCD projector.
  - c) Specific/subject wise Technical Laboratories so that each student of a class is provided with suitable facilities required for the course.
  - d) A dental hygienist clinic fitted with one dental chair, one dental unit with ultrasonic scaler and a set of hand instruments separately for each student and atleast one autoclave for every 5 students for sterilisation.
  - e) A Library should be available to the students.
  - f) Teaching Staff: The teaching staff should have a minimum qualification of BDS Degree. A master degree (MDS) teaching staff will be preferred.

## **II. EXAMINATIONS**

1. An examination for the grant of Diploma of Dental Hygienist shall be conducted by a Board of three Examiners imparting training for qualification of Dental Mechanic Course. One of the Examiners must be external (from outside the institution).
2. Out of the 03 members of examination board , the external examiner and one internal examiner should be MDS, and the third examiner can be BDS/MDS.
3. He/She should be an active teacher in a a recognized medical / dental institution.

4. That medical persons teaching medical subjects may be appointed as Examiners for medical subjects.
5. The examination shall be held on such dates as may be fixed. The examination shall consist of two parts; (1) Primary and (2) Final Examination. '

#### **THE PRIMARY EXAMINATION (FIRST YEAR)**

6. The Examination shall be-open to any student who;
  - a. has been enrolled during one academic year preceding the examination in an institution approved/recognized by the Dental Council of India for this purpose.
  - b. The candidate must have passed 10+2 or two years intermediate or equivalent course thereof with Science subjects (i.e.) Physics, Chemistry and Biology from a recognized Indian University or Pre-University/Intermediate Board.
  - c. has his/her name, submitted to the Board of Examiners, by the head of the institution.
  - d. Produces the following Certificates signed by the Head of the institutions:-
    - i. of good character;
    - ii. of having attended not less then 75% of the full course of lectures delivered and practicals/demonstrations clinical conducted in each of the subjects of examinations
    - iii. Every candidate shall forward his/her application to the Examining Body by a date fixed by that Body, accompanied by the prescribed fee. A candidate who fails to pass or present himself/herself for examination shall not be entitled to claim a refund of the fee.
7. Every candidate shall be examined in the following subjects comprising of three theory papers as follows:-

Paper I	Anatomy, Physiology & Histology
Paper II	Phramacalogy, Pathology & Microbiology.
Paper III	Food Nutrition & Radiology.

Marks for each of the papers shall be as under:-

Written	45
Oral	25
Practical	100
Total	200

Each written paper shall be of three hours.

8. Every candidate shall be required to take up all subjects of the examination. A candidate failing in any paper or papers of this examination before being permitted to reappear at the subsequent examination shall produce evidence of having pursued such a course of training as the Head of the institution may determine.

A candidate, who passes in any one or more papers of the examination shall be exempted from appearing in which he/she has passed and shall be allowed to re-appear in the rest in which he/she has failed in any subsequent examination within a period of two years. After two years the candidate will have to appear in all the papers of this examination.

9. The minimum number of marks required to pass the examination shall be fifty percent in each paper both in the (i) written with oral and (ii) practical parts of the examination.

Candidates who obtain minimum of seventy five percent marks in any paper under examination and passes in all three subjects in first attempt shall be declared-to-have passed with distinction in a particular subject/s. Candidates who do not pass in all the papers in the first attempt and later passes with distinction marks, shall be declared as passed but without distinction.

10. As soon as possible after the examination the Board of Examiners shall publish a list of the candidates who have passed. Each Successful candidate shall be granted a PRIMARY DIPLOMA.

## THE FINAL DIPLOMA EXAMINATION

**11.** This examination shall be open to any student who

- a. has been enrolled for primary academic year preceding the examination.
- b. has previously passed the Primary examination for the Diploma of Dental Hygienists:
- c. has his/her name submitted to the Board of Examiners by Head of the institution.
- d. Produces the following certificates signed by the Head of the Institution :
  - i. is of good character;
  - ii. of having attended not less than seventy-five percent of the full course of lectures delivered and practical/ demonstration/clinical conducted in each of the papers of the examination.
  - iii. of having passed the Primary Examination in all papers.
  - iv. There shall not be a gap of more than two academic years between Primary and final diploma exams.

**12.** Every candidate shall forward his/her application to the Examining Body by a date fixed by that Body, accompanied by the prescribed fee. A candidate who fails to pass or present himself/herself for examination shall not be entitled to claim a refund of the fee.

**13.** Every candidate shall be examined in the following subjects comprising of three papers as follows:-

Paper I	Dental Hygiene & Oral Prophylaxis.
Paper II	Dental Health Education, Community/Public Health Dentistry, Preventive Dentistry.
Paper III	Dental Materials, Dental Ethics & Jurisprudence, Orientation in Dentistry

Marks for each of the papers shall be as under:-

Written	75
Oral	25
Practical	100
Total	200

Each written paper shall be of three hours.

- 14.** Every candidate shall be required to take up all papers of the examination. A candidate failing in any paper or papers of this examination before being permitted to reappear at the subsequent examination shall produce evidence of having pursued such a course of training as the Head of the institution may determine.

A candidate, who passes in any one or more papers under examination shall be exempted from appearing in which he/she has passed and shall be allowed to re-appear in the rest in which he/she has failed in any subsequent examination within a period of two years. After two years the candidate will have to appear in all the papers of this examination.

- 15.** The minimum number of marks required to pass the examination shall be fifty percent in each paper both in (i) written with oral and (ii) practical parts of the examination. Candidates who obtain minimum of Seventy five percent marks in any paper under examination shall be declared to have passed with distinction in a particular subject provided he/she passed all subjects of examination in first attempt . Candidates who do not pass in all the papers of the FINAL EXAMINATION at one and the same time shall not be declared to have passed with distinction.
- 16.** As soon as possible after the examination, the Board of Examiners shall publish a list of those candidates who have passed. Each successful candidate shall be granted a Diploma.



### **III. SYLLABUS FOR THE DENTAL HYGIENISTS COURSE PRIMARY (1<sup>st</sup> YEAR)**

#### **(1) ANATOMY, GENERAL AND DENTAL**

##### **Lectures**

- a. General structure of mucous membrane(tongue, pharynx, lips), bones, muscles, blood
- b. vessels, lymphatics, glands & nerves. Blood and nerve supply in relation to face in
- c. general and\_ teeth and associated structures in particular.
- d. Elementary knowledge of development of the jaws and teeth.
- e. Structure, nomenclature and morphology of human teeth.
- f. Eruption; resorption & occlusion of teeth.
- g. Relationship of teeth with investing tissues.
- h. Muscles of mastication and facial expression.
- i. Tempromandibular Articulation.
- j. Course and distribution of Vth and VIth Cranial nerves.

##### **Practical**

- a. Osteology of head and neck in general and face, including jaws in particular
- b. Morphology of teeth.
- c. Alveolar process of jaw bones.
- d. Section of tooth in situ.

#### **(2) PHYSIOLOGY & HISTOLOGY, GENERAL & DENTAL:**

##### **Lectures**

- a. Cell structure of the human body.
- b. Brief description of the histology and function of various dental and oral tissues e.g.
- c. Gingiva, Periodontal membrane, Alveolar process, Cementum; Enamel, Dentine, Pulp etc.
- d. Nasal membrane Pulp etc.
- e. Salivary glands, ducts and their functions.
- f. Composition and function of Saliva.
- g. Blood : Composition & functions
- h. Mastication, deglutition & Phonation.
- i. General outlines of the physiological processes of the human body-particularly circulatory.

**Practical**

- a. Study of prepared histological slides of oral and dental tissues, sections of a tooth.
- b. Routine blood examination.

**(3) PHARMACOLOGY, GENERAL & DENTAL:****Lectures**

- a. Brief description, nomenclature, derivation, dosage, pharmacological action and
- b. therapeutic uses of drugs commonly used in dentistry( Obtundent, astringent ,mouth wash, antiseptics)

**Practical**

- a. Preparation of gum paints, mouth washes and dentifrices.

**(4) PATHOLOGY & MICROBIOLOGY, GENERAL AND DENTAL:****Lectures**

- a. General principles of Pathology -
- b. Inflammation, degeneration and repair.
- c. Application of general principles of pathology to tooth and surrounding tissues.
- d. Dental Anomalies.
- e. Attrition, Abrasion and Erosion.
- f. Oral manifestation of systemic diseases like diabetes, syphilis, anaemia, vitamin deficiencies and infectious diseases like AIDS & Hepatitis B.
- g. Infection Control in Dental Operatory and Bio-Medical Waste Management and Handling
- h. Neoplasm with reference to oral cavity.
- i. Elementary knowledge of Bacteriology, Asepsis, Infection, Immunity, Brief description of Pathology and Bacteriology of Dental Caries and Gingival infections.

**Practical**

- a. Study of prepared pathological and bacteriological slides relating to oral and dental conditions.
- b. Clinical demonstration of oral and dental manifestation of systemic disorders.

## **(5) DENTAL RADIOLOGY:**

### **Lectures**

- a. Fundamental and elementary principle of Dental Radiology including X- Ray machine, its components and maintenance.
- b. Basic knowledge of Radio Visio. Grapy technique & extra oral radiographs including Panoramic (Ortho-pantographs and cephalostats).
- c. Automatic Film processing
- d. Cataloging & Indexing of IOPA Films.
- e. Knowledge of occlusal, bitewing and digital radiography
- f. Technical aspects of Dental Radiographs i.e. the taking, processing and mounting of Dental Radiographs.
- g. Characteristics of acceptable image, factors that influence finished radiographs, rules of radiation protection. Radiation Hazards.

### **Practical**

- a. Taking, processing and mounting of Infra & Extra Oral Radiographs.

## **(6) FOOD AND NUTRITION:**

### **Lectures and Practicals**

- a. Basic 'food chemistry' in relation to general and Oral Health.
- b. Physical nature of diet in prevention of dental diseases.
- c. Carbohydrates, fats, proteins, vitamins, minerals and water in relation to dental and oral Health.
- d. General food requirements for growth, maintenance and repair of the body.
- e. Assessment & charting of individual diet & counseling.
- f. Effect of malnutrition on oral health.
- g. Special diet and its administration in maxillofacial injury cases.

## **(7) DENTAL HYGIENE AND ORAL PROPHYLAXIS (Primary and Final)**

### **Lectures**

- a. Definition of Hygiene.
- b. Objectives of Dental Hygiene.
- c. Oral Prophylaxis - Various methods.
- d. Oral Prophylaxis: treatment system.
- e. Stains on teeth - extrinsic, intrinsic and their management.
- f. Dental plaque.
- g. Brushing & Flossing Technique.
- h. Dental Calculus
- i. Technical knowledge of ultrasonic scaling
- j. Brief description and the role of Oral Prophylaxis in Gingivitis, Periodontitis, Periodontal and Alveolar abscess.

### **Clinical .**

- a. Instruments, technique of Oral Prophylaxis
- b. Destaining and polishing of teeth.
- c. Topical application of fluorides.
- d. Care of oral cavity and appliances during treatment of maxillofacial cases.

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## **SYLLABUS FOR THE DENTAL HYGIENISTS COURSE FINAL(II YEAR)**

### **(1) DENTAL HYGIENE AND ORAL PRQPHLAXIS:**

Combined courses at para 7 above (as mentioned in 1st year (primary) above)

### **(2) DENTAL HEALTH EDUCATION, COMMUNITY PUBLIC HEALTH DENTISTRY & PREVENTIVE DENTISTRY:**

#### **Lectures**

- a. Defmition of Health and Dental Health
- b. Aims and objectives of Dental Health Education.
- c. Dental Health and Children.
- d. Steps in preventive program, patient counselling.
- e. Dental Health Education-Parents, mothers (anti and post-natal), infants pre-school
- f. Children and grownup Handicapped children.
- g. Dental caries- Prevalence and Prevention.
- h. Prevention by flouridation.
- i. Periodontal Diseases.
- j. Saliva in relation to dental health and disease.
- k. Dietary habits and Dental Health.
- l. Habits and Malocclusion.
- m. Oral Cancer.
- n. Brief outline of historical background of public Health, History of dentistry and Public Health Services. Dental Health Team in relation to community health.
- o. Technical knowledge of Topical Fluoride Application

#### **Practical**

- a. Preparation of models of jaws and teeth-normal and pathological dental conditions.
- b. Designing, drawing and painting of-posters on 'dental health education.
- c. Procedure for arranging. Short talks, skits and features on dental and oral health, visual aids.
- d. Collection of Oral Health related statistics by conducting a small survey of an area.

**(3) DENTAL ETHICS, JURISPRUDENCE AND ORIENTATION IN DENTISTRY**

**Lectures is Practical**

- a. Difference between ethics and law, types of law.
- b. Legal impositions in relation to dental practice, code of ethics.
- c. Unlicensed practice of dentistry.
- d. Regulatory and professional organisation.
- e. Place and function 'of dental profession in the society and discussion of economic problems involved therein.
- f. Social factors in Dental Progress, income and living standard of people.
- g. Objective and scope of dentistry.
- h. Dental specialities

**(4) BASIC KNOWLEDGE OF COMPUTER**

General office routine economics, record-keeping services, Professional referrals and computing skill;

**(5) DENTAL MATERIALS**

**Lectures and Practical**

General knowledge of various material used in Dentistry such as impression material, gypsum products, waxes, investing materials and various filling materials, Temporary and Permanent cements, orthodontic material and implant materials, materials used in maxillofacial and surgical prosthesis.

Recognition and knowledge of various dental equipment and stores used in dental establishment.

Organisation of dental stores, storage and accounting, handling and maintenance of dental items, assembly and minor repair of dental equipment.