#### MAHARASTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

#### **SYLLABUS - FIRST B.D.S**

#### Candidate will be examined in the following subjects:

- 1. General human anatomy and embryology and histology
- 2. General human physiology and biochemistry
- 3. Dental materials

#### Subject 1: GENERAL HUMAN ANATOMY AND EMBRYOLOGY AND HISTOLOGY

Duration of the Syllabus:

1) Lectures - (Minimum) -

2) Demonstration & Dissection - 130 hours

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70 hours

Total 200 hours spread over a period

of one academic year

#### <u>Part A</u> :-

- 1. Introduction.
- 2. Anatomical positions, terminology, planes of reference.
- 3. Basic Concepts of skin & its appendages, bones, muscles, joints, blood vessels, lymphatics & nerves.
- 4. Details of Anatomy & Osteology of Head & Neck.
  - a) Osteology of skull, mandible and cervical vertebrae, Disarticulated maxilla, fetal skull
  - b) Temporo-mandibular joint in detail.
  - c) Muscles of facial expression, mastication, tongue, palate, pharynx, larynx and scalp.
  - d) The Circulatory and Lymphatic systems of Head, Neck & Face.
- e) Study of the cranial nerves & spinal cord. In detail the extracranial courses of V, VII, IX, XI
- (Cranial Part) and XII cranial nerves; upper cervical spinal nerves. T.S. of Spinal Cord showing ascending and descending tracts.

- f) Salivary Glands.
- g) Oral cavity.
- h) Nasal cavity & paranasal air sinuses.
- i) Pharynx, Larynx, Orbit
- j) Thyroid Gland, Pitutary Gland
- k) Deep fascia and triangles of neck.
- 1) Middle ear, tympanic membrane
- m) The Brain, Brainstem major tracts and nuclei. Cerebrum sulci , gyri, functional areas.
  - n) Radiological Anatomy of Head and Neck.
- 5. A) Gross Anatomy of Thorax, Abdomen & Superior Extremity:
  - i) Typical Intercostal Space.
  - ii) Mechanism of respiration.
  - iii) Surface features of the heart & coronory vessels.
  - iv) The lungs Surface features & broncho-pulmonary segment.
  - v) Lecture/Demonstration Stomach, Duodenum, small intestine, Liver,
    Pancreas Spleen, Kidney, Ureter, Uterine tube, Ovary, testies,
    spermatic cord, vasectomy / tubectomy.
  - B) Gross anatomy of Bones, Muscles, Blood Supply, Lymphatic drainage & Nerve supply of superior extremity.

#### 6. Embryology:

- i) General Embryology
- Development of Head, Neck, Face & associated anamolies,Development of tooth
- iii) Genetics Chromosomes, Karyotyping, numerical structural abnormalities, sex-linked disorders

#### **<u>Part B</u>** :

Histology - A course of 30 lectures , demonstrations and practicals covering the following :

- 1. Epithelium including glands.
- 2. Connective tissue, Bone and Cartilage
- 3. Muscle
- 4. Nervous Tissue
- 5. Blood Vessels
- 6. Skin
- 7. Lymphoid Tissue Lymph nodes, Spleen, Thymus, Tonsil
- 8. Oral Tissue Lip, Tooth including developing tooth, Tongue, Salivary glands.
- 9. Gastro-intestinal Tract, Esophagus, Stomach, Duodenum, Jejunum, colon, Appendix, Liver, Pancreas.
- 10. Trachea, Lung
- 11. Kidney, Ureter, Urinary Bladder.
- 12. Reproductive System Testies, Vas deferens, Ovary, Uterine tube, Uterus.
- 13. Endocrine Glands Pitutary, Thyroid, Parathyroid, Supra-renal

#### **Part C** :

#### <u>Dissection</u>:

- a) In detail of Head, Neck and Face excluding eye, ear & brain.
- b) Superior extremity
- c) Demonstration of wet and dry specimens including brain.

#### Subject II: GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Minimum Lectures - 50 hours for Physiology

25 hours for Biochemistry

Practicals - 40 hours for Physiology

30 hours for Biochemistry

Total - 145 hours spread over for a period of one academic year.

#### 1) <u>Introduction to General Physiology</u>:

The cell: Components of Cells and their functions, fundamentals of muscle, nerve physiology, action potential, physiology of muscle contraction, nerve impulse conduction.

#### 2) Blood and Lymph

Composition and Function of Blood

Plasma Protein

R.B.C. - Morphology, formation and functions

W.B.C. - Types, Formation and Function

Blood Coagulation, Blood Groups, Blood Volume and methods of measurement and variations.

Platelets, Anaemia, E.S.R.

Lymph - Formation, Composition, Function.

Oedema.

Immunity - Basic Concepts

Haemoglobin: Basic Chemistry and fate of Haemoglobin.

#### 3) Cardio Vascular System:

General organization of Cardio Vascular system and Haemodynamics

Conduction of Cardiac impulse

Cardiac Cycle

Heart sounds, Pulse

Normal Electro-cardiogram

Regulation - Nervous, Chemical & Hormonal Blood Pressure Regulation

Patho-physiology of shocks, Coronary circulation

Cardiac output

Structure and Physiology of Cardiac Muscle.

#### 4) Respiratory System

General Organization of Respiratory System, Mechanics of Respiration.

Ventilation, Diffusion, Carriage of Respiratory gases

Nervous and Chemical Regulations

Asphyxia , Hypoxia , Cyanosis , Anoxia - Types and Physiological changes.

Artificial Respiration.

#### 5) <u>Digestive Systems</u>

Movements of Digestive Tract including mastication and Deglutition.

Mechanism and control of digestive secretion, digestion and absorption.

Liver and Gall-bladder functions

Bile

Salivary glands and Salivary Secretion in detail.

#### 6) <u>Excretion</u>

Structure and Functions of Kidney.

Formation of Urine - Filtration, Re-absorption and excretion.

Volume, Normal and abnormal constituents.

Physiology of micturation.

#### 7) <u>Skin</u>

Structure and Functions

#### 8) <u>Temperature Regulation</u>

Regulation of Normal body temperature

#### 9) Endocrines

General Organization and regulation of secretions and function of -----

- a) Anterior and Posterior pituitary
- b) Thyroid
- c) Adrenal cortex and medulla
- d) Parathyroid, Calcium and Phosphate homeostasis
- e) Insulin and Glucagon-Islets of Langerhans

#### 10) Reproductive Systems

- a) Male reproductive system Spermatogenesis, Testosterone
- b) Female Reproductive System Menstruation,

  Preganancy (Hormonal Changes and Preganey Tests )

  Family Planning, Physiological basis of Family Planning methods ovary hormones action

#### 11) Physiological Aspects about Nervous system

General Organization of Nervous system

General Concepts of :-

Receptors, sensation and Synapse

Reflexes and their clinical use: ascending and descending tracts.

Functions of spinal chord, Cerebellum, Basal Ganglia

Hypothalamus: Cerebral Cortrx, Thalamus, Cerebro-spinal Fluid

General concepts of higher functions

Autonomic Nervous System

#### 12) Special Senses

Fundamental knowledge of vision, hearing, taste & smell (Morphology, Pathway, Refractory, errors, Retina, Functions of middle ear and internal ear)

#### **PRACTICALS**

Practicals course of 40 hours in Physiology extending over two academic terms and consisting of practical work done by students and of demonstrations as follows:

#### A) PRACTICALS:

- 1) Enumeration of Red Blood Cells.
- 2) Enumeration of White Blood Cells & Differential Count
- 3) Determination of haemoglobin
- 4) Determination of Blood groups
- 5) Determination of bleeding time and clotting time.

#### B) DEMONSTRATIONS

- 1) Determination of packed call volume and E.S.R.
- 2) Demonstration of deep and superficial reflexes
- 3) E.C.G
- 4) Lung volumes
- 5) Artificial respiration.

#### C) CLINICAL PHYSIOLOGY PRACTICAL

- 1) Clinical examination of Arterial Pulse.
- 2) Clinical examination of B.P.
- 3) Clinical Examination of C.V.S.
- 4) Clinical Examination of Respiratory System.

#### **BIOCHEMISTRY**

A course of 25 hours lectures in Bio-Chemistry comprising the following:

- 1) Elementary Chemistry of Carbohydrates, lipids and proteins.
- 2) Enzymes and biological oxidations, elementary considerations.
- 3) Simple foods and their nutritional value.
- 4) Vitamins fat and water soluble vitamins.
- 5) Digestions Salivary, gastric and intestinal.
- 6) Tissue Chemistry Blood and bone.

#### 7) Nutrition.:

General Metabolism, metabolism of proteins, fat and carbohydrates, vitamins sources, requirement and actions, Basic Principles of diatetics, Enzymes, PH regulation, Calcium, Fluride metabolism and mineralisation.

- 8) Urine :- Physical characteristics
- 9) Hormones Biochemistry of Hormones.

A practical and demonstration course of (35) hours on the following

- 1) Test for mono, di and polysaccharides and preparation of Osazones.
- 2) Simple tests for fats and proteins.
  - 1 Protein and Carbohydrate reactions.
  - 2 Chemistry of bread, wheat flour and milk.
  - 3 Chemistry of bile.
  - 4 Spectra of Oxy Hb and carboxy Hb reduced Hb ( Demonstration)
  - 5 Urine Report.
  - 6 Salivary digestion of starch.
  - 7 Test for Vitamin A, Vitamin C, Hydrochloric acid, lactic acid.

#### Subject III: <u>DENTAL MATERIAL</u>

Lectures (Minimum) 40 Hours
Practical & Demonstrations 60 hours

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#### Total

100 Hours.

- 1) Introduction, Aims and Scope of Dental Materials.
- 2) Structure & Behaviour of matters.
- 3) Important Physical properties applicable to Dental Material including their biological considerations.
- 4) Considerations of following metals & alloy used in Dentistry and the effect of their exposure in mouth
  - a) Dental Amalgam
  - b) Gold and Gold Foil
  - c) Stainless Steel
  - d) Chrome Cobalt alloys
  - e) Nickel Chrome alloys
  - f) Casting gold alloys and other alloys used in Dentistry
- 5) Gypsum Products:- Manufacturing, Chemical, Physical & Mechanical properties, uses & manipulation.
- 6) Impression Materials -- General requirements, Classification, composition, manipulation, properties and clinical application.
- 7) Synthetic resins used in Dentistry.
  - a) Denture base materials
  - b) Repair & reline material
  - c) Soft liners & tissue conditioners
  - d) Filled and unfilled Resins as Restorative materials.
- 8) Dental Waxes Classification, varieties, Composition, Properties, manipulation & uses.
- 9) Dental Casting investments Types, Composition, manipulation & properties.
- 10) Dental Casting procedures (in brief) Preparation of die/model Wax pattern, Sprueing, investing Burnout procedures Compensation of casting

- shrinkage, furnaces and muffles and various casting machines. Defects in casting finishing & polishing of castings.
- 11) Welding & Soldering materials & procedure.
- 12) Abrasive & polishing agents used in dentistry. Mechanism of tooth cutting, burs & points.
- 13) Dental Cements Classification, Composition, manipulation properties and uses. Cavity liners and varnishes, Resin cements.
- 14) Dental Porcelain General consideration, classification, condensation, firing

procedure and glazing. Porcelain fused to metals ( Metal Ceramics )

Aluminous porcelain & brief introduction about latest advances in porcelain.

- 15) Root canal filling materials.
- 16) Die and Models materials.

Electroforming & Electroplating (in brief)

- 17) Brief introduction to orthodontic materials.
- 18) Introduction to the materials used for Dental implant.
- 19) Brief introduction about the materials used for maxillofacial prostheses.

#### **PRACTICALS**

- a) Demonstration of above materials, their identification.
- b) Practicals to be conducted for manipulation & study of properties of impression materials. Denture base material & Dental Waxes, Gypsum products. Dental cements & Dental amalgam to inculcate the manipulating skill in students regarding efficient handling of these materials.

#### **EXAMINATION (THEORY PAPER PATTERN)**

- i) Each paper shall be of three hours duration and each practical / clinical examination shall not exceed 5 hours duration.
- ii) Not more than 30 candidates in clinical / practicals should be examined in one day.
- iii) Written (Theory) paper shall have three parts:
- A) <u>Multiple Choice Questions (MCQ)</u> for 20 marks 20 marks questions shall be answered by students in a separate Answer sheet, <u>within first 20 minutes</u>. This answer sheets to be collected by invigilators immediately after 20 minutes completion.
- B) 1) Short Answer Questions (SAQ) for 20 marks.
  - 2) <u>Long Answers questions (Essay type)</u> for 20 marks to be answered only after collecting MCQ answer sheet in remining time of 2 hrs 40 min. Short answer question and Essay type questions will be included in Section I & Section II

#### SPECIFIC DIVISION OF WRITTEN PAPERS

#### Subject: 1: General Human Anatomy, Histology, Embryology etc.

Max. Marks - 60

Section A): MCQ 20 marks

i)Anatomy Syllabus 12 Marks

ii)Histology Syllabus 04 Marks

iii)Embryology Syllabus 04 Marks

|             | i) SAQ ( 5 question x 2 marks )                          | 10 Marks    |               |    |  |
|-------------|--|-------------|---------------|----|--|
|             | ii) Essay Type Questions                                 | 0 Marks     |               |    |  |
| Section     | n C): Division and Marks as Section B                    | 20 Marks    |               |    |  |
|             | Section B should include the syllabus of                 |             |               |    |  |
|             | Part A - Topics related to Head, Neck, Face, C           | Gen. Anatom | y, Brain      |    |  |
|             | Section C should include the syllabus of                 |             |               |    |  |
|             | Part A & part B: Topics- Superior B Genetics, Histology, | Extremity,  | Embryolog     | y, |  |
|             | Thorax and abdomen.                                      |             |               |    |  |
| Subject: 2: | General Human Physiology and Biochemistry                | ,<br>-      |               |    |  |
|             | Max. Marks - 60  |             |               |    |  |
| SECTIONA)   | : MCQ - 20 marks   |             |               |    |  |
|             | i) Physiology Syllabus                                   | 12 Ma       | 12 Marks      |    |  |
|             | ii) Biochemistry Syllabus                                | 08 Ma       | 08 Marks      |    |  |
| SECTION B)  | : Section : I ( Physiology ) -                           | 24 ma       | 24 marks      |    |  |
|             | i) SAQ ( 6 questions x 2 marks )                         | 12 Ma       | 12 Marks      |    |  |
|             | ii) Essay type ( One full or three short notes )         | 12 Ma       | rks           |    |  |
| SECTION C)  | : ( Biochemistry) : 16 Marks                             |             |               |    |  |
|             | i) SAQ ( 4 x 2 marks each )                              | 08 Ma       | rks           |    |  |
|             | ii) Essay type ( One full or two short notes ) 0         | 08 Marks    |               |    |  |
| Subject 3:  | <u>Dental Materials</u> Max. Marks - 60                  |             |               |    |  |
| SECTION A   | MCQ:10 Questions on Prosthetic mat                       | terial 20 N | <b>I</b> arks |    |  |
|             | 10 Questions on Conse & Orthodontia material.            | ervative    |               |    |  |
| SECTION B)  |  |             | 20 Marks      |    |  |
| ( Shou      | ld include all materials from syllabus which are         | e used for  |               |    |  |
| Prosth      | odontics treatments )                                    |             |               |    |  |
| i)          | SAQ ( 5 x 2 Marks each )                                 |             | 10 Mark       | ζS |  |

Section B): 20 Marks

ii) Essay type 10 Marks (One full question or 2 short notes ) SECTION C - 20 Marks (Should include all materials from syllabus which are used for conservative Dentistry and Orthodontic Treatments ) i) SAQ ( $5 \times 2 \text{ Marks each}$ ) 10 Marks

ii) Essay type (One full question & two short Notes) 10 Marks

# APPENDIX B MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK Scheme of Examination for First B.D.S Examination

| Sr. | Subject           | Subheads                  | Maximum        | Minimum         | Maximum  | Minimum     |
|-----|-------------------|---------------------------|----------------|-----------------|----------|-------------|
| No. |                   |                           | marks allotted | marks required  | marks    | marks       |
|     |                   |                           |                | to pass in each | allotted | required    |
|     |                   |                           |                | sub head        |          | for         |
|     |                   |                           |                |                 |          | awarding    |
|     |                   |                           |                |                 |          | distinction |
| 1   | General Human     | i) Theory (Written)       | 60             | -               |          |             |
|     | Anatomy including | ii) Oral                  | 20             | -               |          |             |
|     | Embryology and    | iii) Theory + Oral        | 80             | 40              |          |             |
|     | History           | iv) Internal Assessment   | 20             | -               |          |             |
|     |                   | (Theory)                  |                |                 | 200      | 150         |
|     |                   | iv) Theory + Oral +       | 100            | 50              |          |             |
|     |                   | Internal Assessment       |                |                 |          |             |
|     |                   | (Theory)                  |                |                 |          |             |
|     |                   | i) Practical/Clinical     | 80             | 40              |          |             |
|     |                   | ii) IA Practical/Clinical | 20             | -               |          |             |
|     |                   | iii) Practical/Clinical   | 100            | 50              |          |             |
|     |                   | +Internal Assessment      |                |                 |          |             |
|     |                   | (Practical/Clinical)      |                |                 |          |             |
| 2   | General Human     | i) Theory (Written)       | 60             | -               |          |             |
|     | Physiology and    | ii) Oral                  | 20             | -               |          |             |
|     | Biochemistry      | iii) Theory + Oral        | 80             | 40              |          |             |
|     |                   | iv) Internal Assessment   | 20             | -               |          |             |
|     |                   | (Theory)                  |                |                 | 200      | 150         |
|     |                   | iv) Theory + Oral +       | 100            | 50              |          |             |
|     |                   | Internal Assessment       |                |                 |          |             |
|     |                   | (Theory)                  |                |                 |          |             |
|     |                   | i) Practical/Clinical     | 80             | 40              |          |             |
|     |                   | ii) IA Practical/Clinical | 20             | -               |          |             |
|     |                   | iii) Practical/Clinical   | 100            | 50              |          |             |
|     |                   | +Internal Assessment      |                |                 |          |             |
|     |                   | (Practical/Clinical)      |                |                 |          |             |
| 3   | Dental Materials  | i) Theory (Written)       | 60             | -               |          |             |
|     |                   | ii) Oral                  | 20             | -               |          |             |

| iii) Theory + Oral    | 80       | 40 |     |     |
|-----------------------|----------|----|-----|-----|
| iv) Internal Assessa  | ment 20  | -  |     |     |
| (Theory)              |          |    | 200 | 150 |
| iv) Theory + Oral +   | 100      | 50 |     |     |
| Internal Assessmen    | nt       |    |     |     |
| (Theory)              |          |    |     |     |
| i) Practical/Clinical | 1 80     | 40 |     |     |
| ii) IA Practical/Clir | nical 20 | -  |     |     |
| iii) Practical/Clinic | al 100   | 50 |     |     |
| +Internal Assessme    | ent      |    |     |     |
| (Practical/Clinical)  |          |    |     |     |

Grand Total 600 450

#### **APPENDIX - C**

### SCHEDULE FOR INTERNAL ASSESSMENT MARKS

To assess the overall progress of the students by evaluating the professional skills he/she has developed and the knowledge he has got it is necessary to assess the students periodically. The marks to be allotted should be real estimate of the students achievement of skills and subject knowledge without any prejudice.

- 1) Maximum marks allotted for internal assessment for each subject head i.e. Theory and Practical / Clinical will be 20 marks each.
- 2.A) In all four college tests shall be conducted in one academic year i.e. two tests in each term. Each

test will have marks as under

|              |                                 | <u>Theory</u> | Practical / Clinical |
|--------------|---------------------------------|---------------|----------------------|
| First Term - | First Internal                  | 5 Marks       | 5 Marks              |
|              | Assessment Test                 |               |                      |
|              | Second Internal                 | 5 Marks       | 5 Marks              |
|              | Assessment Test                 |               |                      |
| Second Term  | - <u>Third</u> Internal         | 5 Marks       | 5 Marks              |
|              | Assessment Test                 |               |                      |
|              | Fourth Internal Assessment Test | 5Marks        | 5 Marks              |
|              |                                 |               |                      |
|              | Total:                          | 20 Marks      | 20 Marks             |

a) First Internal Assessment Test should be conducted for the syllabus completed from the start of the

term till the commencement of this examination. ( Unit Test )

b) Second Internal Assessment Test should include entire syllabus completed in first term (Terminal Examination )

- c) Third Internal Assessment Test should include the topics covered only in the second term till the commencement of this examination. (Unit Test)
- d) Fourth Internal Assessment Test should include entire syllabus prescribed by the University (Preliminary Examination to be conducted as per university Pattern)
- 2.B) For Final B.D.S. Subjects: Four College test to be conducted theory as per above pattern in final year only. However, for Clinical Practical test -- 2 test to be conducted in third year teaching during clinical posting and 2 test to be conducted in IV year clinical posting.
- 3) The pattern of Internal Assessment Examination should be as under:
  - a) Theory ... 50 Marks
  - b) Practical ... 50 Marks
  - c) Exception: For community Dentistry the written Examination will be of 40 Marks & Oral will be of 10 Marks.

Marks obtained by the candidate out of 50 to be divided by 10 and to be entered in Proforma even in fraction like 35/50 will be shown as 3.5 out of 5 marks.

- 4) The marks obtained by the candidate in all four examinations, to be amalgamated even with fractions. The fraction, if any, is now to be converted into nearest higher round figure.
- All the records of these examination theory paper/practical record except work will have to be maintained for one year by the Heads of Departments and will have to be produced to the University authority if required for verification.
- a) The marks obtained by the students for First, Second internal assessment tests should be submitted in the prescribed proforma (Appendix -

- D ) to the controller of examination within 15 days of completion of second Internal Assessment Examination.
- b) The marks of all four internal assessment tests shall be submitted to the controller of examination in the proforma as shown in Appendix D, through the Dean / Principal of the college 20 days before of the commencement of the University Theory Examination by Hand delivery or Register post. The Marksheet should be signed by the candidates, teacher incharge/HOD & Dean/Principal.
- 7) In case the candidate fails in University Examination, he should be assessed afresh for internal assessment marks.
- 8) For repeater and detainee students, only two examinations in that term will be conducted. Each test will be of 10 marks each. Thus college authority should submit marks out of 20 by applying the same schedule. The best out of two of internal assessment marks (Previous Assessment/New Assessment) to be submitted to the University for the computation of marks
- In case candidate remains absent on valid ground where his presence elsewhere is justified or when he is unable to attend the Examination on health ground and when he has informed the HOD/Dean about the same before or during the Examination Schedule. Candidate should compensate for this absenty by attending fifth (Extra) Internal Assessment Test. Those students who wants to improve their performance, they ay attend this test.(Entire Syllabus will be included for this 5<sup>th</sup> tests.)

#### **SCHEME OF EXAMINATION FOR B.D.S**

Examination are conducted to assess whether the candidate has acquired the necessary minimum skill and clear concepts of fundamentals essential to his day to day professional work. Examination shall be held twice in a year.

- Maximum Marks for each subject shall be 200. Community and preventive Dentistry, Preclinical Prothodontics practical and Preclinical Conservative Dentistry practicals will be of 100 marks each.
- 2. It is essential to inculcate the habit of progressive learning everyday, there is a need to have frequent tests. Minimum of Four tests in each academic year i.e. two in each term, to be conducted by the college as per the schedule of Internal Assessment Examination mentioned in Appendix C.

#### 3 **Attendance**:

- i) Minimum 75% attendance in Theory and 80% in Practical / clinical in each subject in each academic year.
- ii) The Dean / Principal is authorized to relax condition (i) above, by granting exemption upto 10% for less attendance on valid ground.
- iii) The counting of attendance shall be from the start of the term to the end of the term.
- iv) The student, who fails in University examination or do not appear in that particular examination is required to have minimum attendance of 75% both in Theory & Practical / Clinical in the next academic term and also required to work upto the satisfaction of the head of the concerned department in that academic term prior to his appearance in University examination.

- v) The student will have to attend minimum 70% Theory / Practical classes in these subjects which are thought in that academic year, but having no examination at the end of that academic year. However, when he appears for University Examination in that subject the student will have to satisfy condition (i) above.
- 4) The Duration of Examination: As specified in Direction No.22/2001, "Conduct of Examination" issued on 08/08/2001.
- 5) The Theory Paper Pattern: As specified in Direction No. 22/2001, "Conduct of Examination" (Theory paper pattern)" issued on 08/08/2001.
- 6) Notwithstanding any thing to contrary, in these rules, no person shall be admitted to an examination under these rules, if he /she has already passed that examination or an equivalent examination of any other statutory university.
- 7) If a candidate securing 50% marks in theory and Practical/Clinical+Oral and Internal Assessment separately and having minimum 50% marks in that subject as and aggregate shall be provided an exemption in that subject.
- 8) The gracing the to pass the examination will be according to direction No. 22/2001" Conduct of Examination" issued on 08/08/2001
- 9) Any complaint regarding use of "Unfair means" by candidate, paper setter, moderator, invigilator, examiner for practicals / clinicals or paper valuer should reach the office of Controller of Examinations within 48 hours of such incidence in Witting with valid proof. Such complaints must be delt with seriousness, on top priority to maintain sanctity of examination by setting an enquiry and judgement shall be given within 30 days after the incidence reported. The person (s) connected with such episodes and if found guilty shall be debarred from University examination work for a period of minimum 3

- years. A person if lodging false complaint will be liable for legal action as per the provision of University act.,
- 10) Valuation of Answer Books: Central spot valuation system shall be adopted.

  Approved and experience teachers shall be invited for this job. Strictness and most confidential status has to be maintained. Answer book shall be coded.
- 11) There shall be one external examiner and one internal examiner. Internal examiner will be from colleges / university area (Regional) to conduct practical / clinical examination in every subject. The examiner shall have minimum experience of 5 years as a approved teachers of the University in that subject with post graduate qualification in that subject.
- 12) The Dean of the college will be the in charge of the practical / clinical examination center where it is not possible for the dean to discharge this duty, he shall appoint Vice-Dean or senior most Professor to work as Center Incharge with prior intimation.
- The University shall pay the appropriate remunerations to the center in charge and all others connected with the work of examination. The Dean shall inform the names of those persons before the commencement of University examination at that center.
- 14) The charges for the materials used for the smooth and proper conduction of University practical/clinical examination work shall be paid by the University on submission of original receipts of the purchases and certificate from the Dean about such material requirement and consumption. Prior permission from the University shall be obtained by the Dean from University in regards to number of items, materials quantity and approximate cost of the material.
- List of Materials for Dental Material Practical (Subhead) Manipulation:

  (Allotment by draw system)
- 1 Dental Plaster

- 2 Zinc Oxide Eugenol impression paste
- 3 Alginate impression material
- 4 Zinc phosphate cement
- 5 Impression-
- 6 Silver alloy & mercury
- 7 Elastomeric impression material (optional)
- 8 Glass ionomer cement (optional)
- 9 Dental Casting investing (optional)
- 16. Oral (Grand Viva):
  - : Maximum 20 Marks alloted for each subject in Oral to be conducted separately examiners and the marks to be submitted in a separate sheet as per the proforma supplied by University (Appendix F.) Marks to be added to Practical Head.
- a) General Human anatomy, Histology e.t.c. : 20 marks to be devided equally amongst the available examiners.
- b) General Human Physiology and Biochemistry

20 Marks

i) Oral on physiology Syllabus

12 Marks

ii) Oral on Biochemistry syllabus

08 Marks

c) Dental Material - 20 Marks devided as 12 for Prosthodontic Material and 8 for conservative and Orthodontic material.

#### MAHARASHTRA UNIVERSITY OF HEALTH SCIENCE, NASHIK

Scheme of Practical & /or Clinical examination

University Practical/Clinical Examination ...

80 Marks

The Practical/Clinical examination shall be conducted at the centres where adquate facilities are available to conduct such examinations and the centre/college is approved/recognised by Dental Council of India.

Not more than 30 students to be examined per day. The marks should be submitted in the proforma (Appendix - E & F) supplied by the University Authority. This proforma should be signed by the examiners. Over writing or scratching will not be permitted. Any corrections made, must have the counter-signature of external examiners .The sealed envelop containing this proforma shall be submitted on the same day to the Dean for onward transmission to the Controller of examinations, Maharashtra University of Health Sciences, Nashik. No examiner or any other person connected with the work of practical examination is permitted to carry any paper or violate the rules of examination. The person found guilty will be debarred from such Confidential work for a minimum period of 5 Consecutive University examinations or the actions as suggested by the relevant Committee to investigate such matters.

### Appendix E

### FORMAT OF THE PRACTICAL/CLINICAL EXAMINATION MARKS

### MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

| Chart                                | showing     | ma     | rks      | obta | ained  | b     | У        | the  |      | can | didat | es      | in | 1   | practica   | ıl | / clinical  |
|--------------------------------------|-------------|--------|----------|------|--------|-------|----------|------|------|-----|-------|---------|----|-----|------------|----|-------------|
| examination, to be                   | e submitted | by the | examiner | in   | sealed | cover | through  | the  | Dean | of  | the   | college | to | the | Controller | of | Examination |
| ,MUHS, Nashik                        |             |        |          |      |        |       |          |      |      |     |       |         |    |     |            |    |             |
| Name of Examination :Summer / Winter |             |        |          |      |        |       |          |      |      |     |       |         |    |     |            |    |             |
| Centre :                             |             |        |          |      |        |       |          |      |      |     |       |         |    |     |            |    |             |
| Subject :                            |             |        |          |      |        | M     | ax. Mark | s 80 |      |     |       |         |    |     |            |    |             |

# Sub. 1: General Human Anotomy & Histology etc

|  | ROLL<br>NO. | SPOTING (30 MARKS)      |          |        | PRACTICAL VIVA-VOCE   |       |               |                |               |        |         | TOTAL |
|--|-------------|-------------------------|----------|--------|---|-------|---------------|----------------|---------------|--------|---------|-------|
|  |             | HISTO<br>LOGY<br>SLIDES | BONES    | ORGANS | HISTOLOGY SLIDES (IDENTIFICATION WITH DIAGRAM AND LABELING) | BONES | SOFT<br>PARTS | EMBRY<br>OLOGY | RADIO<br>LOGY | ORGANS | RECORDS |       |
|  |             | ( 10 Slides X           | (5 X 1 ) | (5X1)  | (2 Slides X 5 = 10)   | (10)  | (10)          | (05)           | (05)          | (10)   | (10)    | (80)  |

# Sub. 2: General Human Physiology & Bio-chemistry

| RC | DLL | HAEMATOLOGY                              | OGY BIOCHEMISTRY CLINICAL RECORDS BOOKS |                | S          | TOTAL        |       |
|----|-----|--|---|----------------|------------|--------------|-------|
| NC | Э.  |  |   | PHYSIOLOGY     |            |              | MARKS |
|    |     |  |   |                |            |              | 80    |
|    |     | (30 MARKS)                               | (20 MARKS)                              | (20 MARKS)     | PSYSIOLOGY | BIOCHEMISTRY |       |
|    |     | (001,111,111,111,111,111,111,111,111,111 | (20 1/11 11(12))                        | (20 111 11113) | (5 MARKS)  | (5 MARKS)    |       |

# **Sub. 3: Dental Materials**

| ROLL<br>NO. | SPOTING    | MANIPULAT  | TON OF ANY ONE MATER | RECORD<br>BOOK<br>(JOURNAL) | TOTAL |             |
|-------------|------------|------------|----------------------|-----------------------------|-------|-------------|
|             |            |            | MANIPULATION         | QUALITY OF                  | (10)  |             |
|             | 10 X 4     | RATIO (05) | OR MIXING            | FINAL                       |       |             |
|             | (40 MARKS) |            | (20)                 | PRODUCT (05)                |       | 80<br>MARKS |

| External Examiners : | <b>Internal Examiners:</b> |               |
|----------------------|----------------------------|---------------|
| Name:                | Name :                     |               |
| Signature:           | Signature :                |               |
|                      |                            | (Common to Al |

#### **APPENDIX - F**

# MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES,NASHIK

First B.D.S. Summer / Winter 200\_\_\_ Examination

| Subject :              |                          |            |                          |   |
|------------------------|--------------------------|------------|--------------------------|---|
| Name of the Centre:    |                          |            |                          |   |
| Date of Practical Cond | uction:                  |            |                          |   |
| (No Straching or overw | vriting please) correcti |            | y External & Inter       |   |
| Roll No.               | Enrollment No.           |            | out of 20 (Max) In words | 5 |
| External Examiners :   |                          |            | Examiners :              |   |
| Name:                  | 1                        | Name:      |                          |   |
| Signature:             |                          | Signature: |                          |   |

# Appendix – D MAHARASHTRA UNIVERSITY OF HEALTH SCIENCS, NASHIK

|     |         | INTER    | RNAL ASSE      | SSMENT M       | ARKS FO         | )RB.I          | D.S. SUM        | MER/WINT                     | ER EXAMINATIO  | N, YEAR                     |                |  |  |
|-----|---------|----------|----------------|----------------|-----------------|----------------|-----------------|------------------------------|--|-----------------------------|----------------|--|--|
|     |         |          | Subjec         | t:             |                 |                |                 | Subhead – Theory / Practical |  |                             |                |  |  |
|     |         | College  | e:             |                |                 |                |                 |                              | ·  |                             |                |  |  |
| Sr. | Enroll. | Roll No. | Name of        | Inter          | nal Assess      | sment Tes      | st              | Aggregate                    | Net total  | In                          | Sign.          |  |  |
| No. | No.     |          | the<br>Student | First<br>Max 5 | Second<br>Max 5 | Third<br>Max 5 | Fourth<br>Max 5 | Total<br>Out of 20           | (after rounding<br>the fraction, if<br>any)<br>Marks obtained<br>out of 20 | Words<br>(Out of<br>Twenty) | of<br>Students |  |  |
|     |         |          |                |                |                 |                |                 |                              |  |                             |                |  |  |