

# SENIOR SCHOOL CURRICULUM

## 2017-18

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### HEALTH CARE SCIENCE

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#### CLASS–XI ELECTIVE FOOD NUTRITION & DIETETICS (729) THEORY

*Time: 3 Hours*

*Marks: 60*

**1. Food Nutrition**

**25**

- Constituents of Food (Carbohydrates, Proteins, Fats, Vitamins and Minerals).
- The Process of Nutrition.
- Balanced Diet.
- Nutritional disorders (Protein energy malnutrition and Vitamin Deficiency Diseases).
- Anemia: Causes, Identification, Prevention and control.

**2. Diet in Health and Disease**

**15**

- Diet in Diabetes.
- Diet in Hypertension and Heart Disease.
- Diet in Gastro-enteritis.
- Diet in other gastro-intestinal diseases.
- Diet in urological disorder.
- Diet in other disorders.

**3. Nutrition Education**

**10**

- For pregnant and lactating women.
- For infants and children to meet nutritional needs across age groups, gender and life styles.
- For those suffering from common diseases (Tuberculosis, Anemia, Vitamin and mineral deficiency, Goitre).

**4. Computer Applications in Health Care**

**10**

- Basics of Computer including Internet.
- Usage of Computer in Hospital Administration (medical record keeping).

## **PRACTICAL**

*Time: 2 Hours*

*Marks: 40*

### **Food Nutrition and Dietetics**

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|----|--|----|
| 1. | Preparation of ORS and usage.  | 7  |
|    | <ul style="list-style-type: none"><li>• Home made ORS.</li><li>• WHO Approved ORS Packets.</li></ul> |    |
| 2. | Posting in Hospital Catering Service.  | 4  |
| 3. | Posting in Dietetics Department of the Hospital.   | 4  |
| 4. | Project on Nutrition and Diet.   | 5  |
| 5. | Specimens & models: Identification & explanation.  | 10 |
| 6. | Project work on computer applications in healthcare documentation.                                   | 10 |

## **CLASS–XI OPTIONAL**

### **ANATOMY & PHYSIOLOGY (730)**

#### **THEORY**

*Time: 3 Hours*

*Marks: 70*

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|-----|--|---|
| 1.  | Definition of Anatomy & Physiology.  |   |
|     | (a) Description of various regions of the body.                            | 3 |
|     | (b) Elementary Knowledge of cells and tissues of the body.                 | 3 |
| 2.  | Elementary Knowledge of Anatomy & Physiology of different organs& systems. | 2 |
| 3.  | Sense Organs – Eye, Ear, Skin, Nose, Tongue.                               | 7 |
| 4.  | Skeletal System.   | 5 |
| 5.  | Bone Structure & Types of bones, Joints & Muscles.                         | 3 |
| 6.  | Cardio vascular system.  | 6 |
| 7.  | Respiratory System.  | 5 |
| 8.  | Lymphatic System.  | 2 |
| 9.  | Blood forming System.  | 6 |
| 10. | Digestive System.  | 6 |
| 11. | Uro-Genital System.  | 6 |
| 12. | Endocrine System.  | 3 |
|     | (Name of the endocrine organs, locations and functions).                   |   |
| 13. | Reproductive System.   | 4 |
| 14. | Neurological System.   | 6 |
| 15. | Dental System.   | 3 |

## **PRACTICAL**

*Time: 2 Hours*

*Marks: 30*

1. Identification of bones, joints and muscles through use of charts and slides Skeleton's model and other models. **5**
2. Measuring Blood Pressure (BP) Temperature, Pulse, Respiratory rate, study of Blood Smear, Urine test for Protein & Sugar.  
Under Microscope for blood components, study of tissues under microscope.
3. Identification of place of organs of body through: **5**
  - Charts.
  - Models.
  - Skeleton.
  - Name of Bones and joints.
  - Identification & description of Liver, Lungs, Brain & Kidneys and other body parts.
4. Anatomy & Physiology Record (every students has to make his/her own record). **5+5**

## **CLASS–XII ELECTIVE BASIC CONCEPTS OF HEALTH & DISEASE AND MEDICAL TERMINOLOGY (729) THEORY**

*Time: 3 Hours*

*Marks: 70*

- 1. Definition of Health & Concepts Related to Health** **15**
  - Primary Health Care, Secondary Care, and Tertiary Health Care.
  - Promotive Health Care, Preventive Health Care, Curative Health Care, and Rehabilitative Health Care, Spiritual Health Care.
  - Concepts of Social medicine, Preventive medicine and Community medicine and Public Health.
- 2. Concepts Related to Diseases** **15**
  - Different kinds of diseases: Infectious/communicable/non-communicable & degenerative diseases.
  - How interaction between disease causing agents (Physical, Chemical, Biological,) host and environment results in diseases.
  - Modes of transmission of communicable diseases:
    - Diseases of Contact transmission.
    - Air-borne diseases.
    - Water borne diseases.
    - Vector borne diseases.

<b>3. Promotion of Healthy Environment</b>	<b>5</b>
<ul style="list-style-type: none"><li>• At individual level.</li><li>• At family level.</li><li>• At Community level.</li></ul>	
<b>4. Prevention &amp; Control of Diseases</b>	<b>20</b>
<ul style="list-style-type: none"><li>• Water safety.</li><li>• Food safety.</li><li>• Environmental sanitation (including safe disposal of solid &amp; liquid wastes).</li><li>• Personal hygiene.</li><li>• Safe disposal of human excreta.</li><li>• Safe disposal of Bio Medical wasted (BMW) Management.</li><li>• Control of vectors and pests (control of house files, mosquitoes, rats, cockroaches etc.).</li><li>• Healthy housing &amp; preventing of air pollution.</li><li>• Isolation procedures.</li></ul>	
<b>5. Medical Terminology</b>	<b>15</b>
<b>5.1 Basics of Medical Terminology</b>	
<ul style="list-style-type: none"><li>• Words, Prefixes &amp; suffixes used in medical terms (Symptomatic, Diagnostic and Operative terminology).</li><li>• Origin of medical terminology.</li><li>• Terminology to identify basic body systems, and vital signs.</li><li>• Distinction between the symptoms, signs and specific diseases.</li><li>• Determining the specialty by identifying the meaning of the word root.</li></ul>	
<b>5.2 Basic Word Roots, Prefixes and Suffixes</b>	
<b>5.3 The Human Body in Health and Disease</b>	
<ul style="list-style-type: none"><li>• Terms related to pathology of cells, tissues, and glands.</li><li>• Types of diseases.</li><li>• Recognize different medical specialties and specialists.</li><li>• Terms used in different Departments of the hospital (Symptomatology, diagnostic entities, intervention methodology, equipment used etc.):</li><li>• Orthopaedics &amp; traumatology.</li><li>• Digestive system.</li><li>• Circulatory and lymphatic system.</li><li>• Respiratory system.</li><li>• Gynaecological system.</li><li>• Obstetrics &amp; Maternal &amp; child care.</li></ul>	

- Neurology & Psychiatry.
- Internal Medicine.
- General Surgery.
- ENT & Ophthalmology.

#### 5.4 Coding of Diseases

- Introduction to coding & classification of Diseases.
- Introduction to Volume I & II of International Code of Diseases (ICD).

## PRACTICAL

*Time: 2 Hours*

*Marks: 30*

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|-----------|---|-----------|
| <b>1.</b> | <b>A.V. Aids – Making charts, Models, Pamphlets etc.</b>  | <b>10</b> |
|           | <ul style="list-style-type: none"> <li>• Water Safety.</li> <li>• Food Safety.</li> <li>• Healthy Housing and Prevention of air pollution.</li> </ul>   |           |
| <b>2.</b> | <b>Safe Disposal of Biomedical Waste Management</b>   | <b>10</b> |
|           | <ul style="list-style-type: none"> <li>• Demonstration with different specimen and color coded containers i.e. General waste, Sharps, Blood contaminated Swabs, Swabs or materials contaminated with any body fluids, Plastic wastes, Broken Glass pieces.</li> </ul> |           |
| <b>3.</b> | <b>Medical Terminology</b>  | <b>10</b> |
|           | <ul style="list-style-type: none"> <li>• Practical setting exposure to procedure and tests used in hospitals.</li> </ul>  |           |

**Note:**

**Additional (Optional)**

Please refer the concerned year Senior Secondary Curriculum of CBSE.

## LIST OF RECOMMENDED BOOKS

1. Basic Concepts of Health & Diseases and Medical Terminology, Practical Manual, Class–XII, Published by CBSE.
2. Basic Concepts of Health & Diseases and Medical Terminology, Text Book, Class–XII, Published by CBSE.
3. Food Nutrition & Dietics Theory, Class–XI, Published by CBSE.
4. Food Nutrition & Dietics Practical, Class–XI, Published by CBSE.
5. NCERT, Anatomy (for MLT): NCERT, New Delhi. 1988.
6. NCERT, Physiology (for MLT) : NCERT, New Delhi 1988
7. World Health Organization (WHO), International Classification of Diseases (WHO).
8. Health Information of India – Ministry of Health & Family Welfare, Government of India.

## **LIST OF EQUIPMENTS AND SOFTWARE**

Medical monitors, allow medical staff to record patients' vital parameters. Monitors may measure patient's vital signs and other parameters including ECG, EEG, blood pressure, and dissolved gases in the blood.

Medical laboratory equipment automates or helps analyze blood, urine and gases.

The equipment needed includes:

1. Phlebotomy & Intravenous (i.v.) Cannulation Kit.
2. First Aid equipment.
3. Skeletons, charts and posters.
4. Models for all parts of body (different organs and organ system).
5. Microscopes.
6. Hand washing equipment.
  - reusable towels.
  - pumice stones (for scrub wash).
  - soap & water.
  - alcohol hand rubs.
7. Biomedical Waste (BMW) Containers and Syringe & Needle destroyers – samples of different sizes containers.
8. Slides cover slips, various stains.
9. Nutrition related charts and posters.
10. Computer and printer – with Internet connection.
11. B. P. apparatus – dial type, electronic type and mercury type.
12. Thermometer.
13. Glucometer.