SYLLABUS & CURRICULUM
FOR
BACHELOR OF NATUROPATHY AND YOGIC SCIENCES

DURATION- 4$^{1/2}$ Year + 1 YEAR INTERNSHIP

SUBJECT & TEACHING HOURS

1 Prof. BNYS प्रथम सत्र बी.एन.वाई.एस. परीक्षा (Duration–One & Half Year) समयावधि–1वर्ष 6 माह

S.NO.	Subject	Paper	Theory	Practical	Total Hours
1.	शरीर रचना (Anatomy)	(Paper-I & II)	200	100	360
2.	शरीर क्रिया (Physiology)	(Paper-I & II)	200	100	300
3.	प्राकृतिक चिकित्सा दर्शन (Philosophy of Naturecure)	(Paper-I & II)	200	100	300
4.	योग के आधारभूत सिद्वांत (Basic Principles of Yoga)	(I)	100	50	240
5.	जैव रासायनिक विज्ञान (Biochemistry)	(I)	100	50	240
6.	संस्कृत (Sanskrit)	(I)	100	50	240
	कुल योग (Total)	**9**	**900**	**450**	**1680**

II Year BNYS द्वितीय वर्ष बी.एन.वाई.एस. परीक्षा (Duration–One Year) समयावधि– 1 वर्ष

S.NO.	Subject	Paper	Theory	Practical	Total Hours
1.	विकृति विज्ञान (Pathology)	(I)	100	100	240
2.	सूक्ष्म जीव विज्ञान (Microbiology)	(I)	100	50	180
3.	योग दर्शन (Yoga Philosophy)	(I)	100	100	180
4.	वर्ण एव चुम्बक चिकित्सा (Chromo & Magneto Therapy)	(I)	100	100	180
5.	सामुदायिक स्वास्थ्य एवं चिकित्सा (Community Health & Medicine)	(I)	100	100	240
6.	मौलिक फार्माकोलोजी एवं द्रव्य गुण विज्ञान (Basic Pharmacology & Pharmacognosy)	(I & II)	200	100	240
	कुल योग (Total)	**7**	**700**	**550**	**1260**

III Year BNYS तृतीय वर्ष बी.एन.वाई.एस. परीक्षा (Duration– One Year) समयावधि – 1 वर्ष

S.NO.	Subject	Paper	Theory	Practical	Total Hours
1.	मैनुपुलेटिव थैरेपी (Manipulative Therapy)	(I)	100	100	180
2.	एक्युपक्चर,एक्युप्रेशर एवं रिफ्लेक्सोलॉजी (Acupuncture, Acupressure & Reflexology)	(I)	100	100	240
3.	योग एवं इसके प्रयोग (Yoga & Its Applications)	(I)	100	100	180
4.	क्लीनिकल डायग्नोसिस (Naturopathy Diagnosis Conventional Medicine, First Aid & Emergency Medicine)	(I & II)	200	100	240
5.	फोरेन्सिक मेडीसिन एण्ड टॉक्सिकोलॉजी (Forensic Medicine & Toxicology)	(I)	100	50	180
6.	उपवास चिकित्सा पोषण एवं पथ्य विज्ञान (Fasting Therapy, Nutrition & Dietetics)	(I)	100	100	240
	कुल योग (Total)	**7**	**700**	**550**	**1260**

IV Year BNYS चतुर्थ वर्ष बी.एन.वाई.एस. परीक्षा (Duration – One Year) समयावधि – 1 वर्ष

S.NO.	Subject	Paper	Theory	Practical	Total Hours
1.	फिजीकल मेडीसिन एण्ड रिहेबिलिटेशन (Physical Medicine & Rehanilitation)	(I)	100	100	240
2.	जल एवं मृदा चिकित्सा (Hydro & Mud Therapy)	(I& II)	200	100	240
3.	प्रसुति एवं स्त्री रोग चिकित्सा (Obstetrics & Gynecology)	(I)	100	100	180
4.	योग चिकित्सा (Yoga therapy)	(I)	100	100	180
5.	चिकित्सालय प्रबंधन, अनुसंधान विधियॉ एवं मेडीकल स्टेटिक्स (Hospital Management, Research Methodology & Medical Statics)	(I)	100	100	240
6.	व्यवाहारिक प्राकृतिक चिकित्सा (Clinical Naturopathy)	(I)	100	100	240
	कुल योग **(Total)**	**7**	**700**	**600**	**1320**

Internship – 1 Year and Dissertation as per allotted topics.

विशाखानुप्रवेश – 1 वर्ष एवं महाविद्यालय द्वारा आवंटित बिन्दु पर एक लघु निबन्ध

SYLLABUS & CURRICULUM

FOR

BACHELOR OF NATUROPATHY AND YOGIC SCIENCES

I YEAR

Duration- $1^{1/2}$ Year

1. **Anatomy (Paper-I & II)**
2. **Physiology (Paper-I & II)**
3. **Philosophy of Nature Cure (Paper I & II)**
4. **Basic Principals of Yoga**
5. **Biochemistry**
6. **Sanskrit**

ANATOMY

PAPER – 1

- General anatomy
- Osteology
- Myology
- Arthrology
- Head, neck and brain
- Upper limb
- Micro anatomy

PAPER – 2

- Thorax
- Abdomen and pelvis
- Lower limb
- Embryology in brief
- Histology
- Cellular and Systemic

PRACTICALS

THEORY

PAPER – I

COURSE CONTENT

(Related Regional Anatomy, Histology, Myology, and Arthorology & Osteology of Upper Limb, Head, Neck & Brain and Microanatomy)

I. **GENERAL ANATOMY**:Introduction of Anatomy , Anatomical Terms, different branches of anatomy, Introduction of bones, its classification, functions, applied anatomy ; cartilage-types, action, applied anatomy , basics of all the tissues and systems of the human body, Sharir panch bhautic tatava, Anatomical knowledge of Ida, Pingla, Sushumna and Shat Chakra.

II. **OSTEOLOGY**: (Bones of Skull & Upper limb) Names of the bones and their positions; general features, skull –all normal and interior of skull & mandible.

III. **MYOLOGY**: (Head & Neck and upper Limb) Origin, insertion, Nerve supply and action of the muscle with the applied anatomy and clinical testing.

IV. **ARTHROLOGY (**Head & Neck, upper limb) General features of different types of joints. Brief study of the following joints of the body with movements, shoulder, elbow, Wrist and other smaller joint of Head & Neck, Upper Limb.

V. **HEAD, NECK AND BRAIN** Head and neck –introduction, scalp, face and lacrimal apparatus , sides of the neck, sub occipital triangle, contents of vertebral canal (brief) , meningeal layer , cavernous sinuses and other sinuses in brief, hypophysis cerebri, trigeminal ganglion, middle meningeal artery, contents of the orbit , triangles of the neck , ansa cervical , parotid gland , optic ganglion, submandibular gland , thyroid gland, parathyroid gland , thymus ,

blood supply of deep structure, cervical ganglion, cervical plexus styloid apparatus, oral cavity, palate , pharynx, auditory tube, nasal septum, paranasal sinuses ,cartilage of larynx. Parts of nervous system, meninges, ventricles, motor and sensory, pathways, cranial and sensory cortex and their bloods supply with cross sectional studies in brief morphology of spinal cord. Section of medulla-pyramidal decussating, sensory decussating, upper part of medulla part of medulla, Pons – midlevel, mid brain- mid superior colliculus , inferior colliculus , cerebellum –horizontal –mid sagital section, horizontal section at interventiculur formation, coronal section at anterior commissure, coronal section at mammillary body. Sensory organs (region wise) –gross anatomy of eyeball, ear nose and tongue in brief, blood brain barrier.

VI. **UPPER LIMB**: - Introduction, breast, clavipectrol fascia, axilla, lumbar triangle, triangle of auscultation, bursa of upper limb, musculotendinous cuff, intramuscular spaces, cubital fossa, synovial sheath, retinaculum of hand, palmer aponeurosis, spaces of hand, anatomical snuffbox.

VII. **MICRO ANATOMY** -12 General topics, systemic topics (separate list attached)

1. Histology, study of the basic tissues of the body, functional correlation of the structural components of the organs.
2. Systemic histology of concerned organs.

PAPER – II

COURSE CONTENT

(Related Regional Anatomy, Histology, Embryology, Myology, Arthorology & Osteology of Thorax, Abdomen and Pelvis, Lower Limb and embryology)

I. **THORAX: -General introduction** pericardium, thorax wall, position and parts of the heart , conducting system, blood supply and nerve supply of the heart, names of the blood vessels and their distribution in the body, lungs & pleura-general features, surface marketing, broncho-pulmonary segments, applied anatomy, mediastinum, diaphragm, esophagus, thoracic duct.

II. **ABDOMEN AND PELVIS**: - Peritoneum- General disposition– horizontal and vertical, parts relation, blood supply, nerve supply of abdominal organs, pelvic organs –parts position, relation, blood supply, nerve supply.

III. **LOWER LIMB**:-Deep fascia –modification, saphaneous veins, lymph nodes, adductor canal muscles-nerve supply, blood supply, action, joints, arches of foot, and joints of lower limb.

IV. **EMBRYOLOGY IN BRIEF**: Definition of embryology, brief account of male and female , ovary; definition of gamete; sperm, ova ,gametogenesis, migration of primordial germ cells into gonadal ridge; structure of sperms growth of ovarian and uterine cycles. Principle of family planning (contraception), invitro fertilization (for integrated teaching). Systemic embryology(brief): development of the individual organ of digestive systems, genital system, urinary system, respiratory system, cardiovascular system , nervous system, special sensory organs (in Brief) endocrine glands and mammary gland. Development abnormalities (in brief).

PRACTICALS

GROOS ANATOMY:

(Dissection/ Demonstration of following parts of body)

Upper Limb: Dissection: Pectoral, scapular, arm, forearm

Prospected Parts: joints, palm and dorsum for hand.

Thorax: Dissection: chest wall, mediastinum, lungs and heart.

Abdomen: Dissection: anterior abdominal wall and inguinal region, viscera and posterior abdominal Wall.

Pelvis: Dissection: pelvis viscera and blood vessels and nerve sagittal section (M&F)

Prospected parts: Sole of the foot and joints.

Head and Neck: Dissection: scalp, superficial and dissection of face and neck.

Prospected Part: Orbit, eyeball, submandibular region, temporal fosse, cranial cavity,Nasal and oropharyngeal regions, ear, larynx and pharynx. Cross sections at c-4, c-6Levels, sagittal section of hand and Neck.

Nervous system: Section of brain and prospected specimens and major functional areas, Gross structure of brain and spinal cord and study of gross section as mentioned earlier (in brief).

DEMONSTRATIONS:

- Bones-as described in osteology section :
- Brain and spinal cord.

SPECIFIC SKILLS: students should learn the following skills

1. To localize important pulsations and the structure against which pressure can be applied in case of bleeding & Trauma of particular artery.
2. To elicit superficial and deep reflexes.
3. To demonstrate muscle testing and movements at joints.
4. To locate for: Lumbar puncture, sternal puncture, pericardial tapping, and liver biopsy.
5. To locate veins for venous puncture.
6. To locate the site for emergency such as tracheotomy.

HISTOLOGY

General Histology:-

1. Microscope
2. Cell
3. Epithelial Tissue I
4. Epithelial Tissue II
5. Connective Tissue- Bones and Cartilages
6. Muscular tissue
7. Nerve tissue (TS & LS of peripheral nerve, sensory & sympathetic ganglion, optic nerve)
8. Epithelial glands (serous, mucous and mixed salivary gland)
9. Circulatory system (large artery, medium sized artery, larger vein)
10. Lymphatic system(Lymph nodes, Thymus, Tonsils, spleen)
11. Skin & Appendages
12. Placenta & Umbilical cord

Systemic Histology:-

1. Respiratory system.
2. Esophagus & Stomach.
3. Liver, Gall bladder, pancreas.
4. Urinary system I (Kidney)
5. Urinary system II (ureter, Bladder, Urethra).
6. Small & large intestine.
7. Reproductive system – Female.
8. Reproductive system-Male.
9. Upper GIT (Lip, tongue)
10. Hypophysis cerebri,Thyroid and suprarenal glands.
11. Eye-Cornea and Retina.

TEXT BOOKS

1. Text book of anatomy (Vol-I,II,III) -by B.D. Chaurasia
2. Text books of anatomy -by Hamilton
3. Human Embryology -by Inderbir singh
4. Cannigham's Text book of anatomy -by Chunnigham
5. Balley's text book of Histology -by Bally

REFERENCE BOOKS

1. Text books of anatomy - by Gray
2. Atlas of Histology - by Difforie
3. Atlas of Histology - by Poddar
4. Text book of Human Histology - by Dr. Veena Bharihoke
5. A color Atlas of Human Anatomy - by Mcminn

PHYSIOLOGY

PAPER – 1

- General physiology
- Blood
- Cardiovascular system
- Respiratory system
- Digestive system

PAPER – 2

- Excretory system
- Endocrine system
- Reproductive system
- Nerve muscle physiology
- Central nervous system
- Autonomic nervous system
- Special senses

PRACTICALS

Theory

Paper I

Deha prakrit nirman, bhed lakshan

I. **GENERAL PHYSIOLOY**

1. Cell structure
2. Sub-cellular units
3. Cell membrane and their properties
4. Transport mechanisms
5. Bioelectrical potentials
6. Body fluids and homeostasis

II. **BLOOD**:-Physical properties, compositions and functions of blood.

1. Plasma proteins

a) Normal values
b) Origin and methods of separation
c) Functions and variations in health and disease.

2. Bone marrow

a) Formed elements
b) Composition and functions

3. Erythrocytes

a) Morphology and variations in health and diseases
b) Development of erythrocytes
c) Site and stages in development
d) Necessary factors
e) Regulation of development of erythrocytes
f) Life-span and fate of erythrocytes
g) Erythrocytes sedimentation rate (ESR)

4. Hemoglobin

a) Structure, Synthesis, function and metabolism

b) Types of hemoglobin

5. Anemia – Definition and classification

6. Jaundice- Definition and classification

a) Role and function of spleen

7. Leucocytes

a) Classification, morphology, development and functions

b) Variation in health and disease

8. Thrombocytes

a) Origin, morphology and functions

b) Variation in health and disease

9. Homeostasis

a) Mechanism of homeostasis, coagulation of blood

b) Fate of clot and disorders of clotting

10. Anticoagulants

a) Mechanism of action and clinical applications

11. Blood groups

a) Classification

b) ABO and RH System

c) Blood Transfusion, indication and hazards

12. Lymph and tissue fluids

a) Lymph and reticular system

b) Fluid compartments and water Balance

c) Principles of immune system

d) Cellular and humeral immunity

III. CARDIO-VASCULAR SYSTEM

Historical perspective and organization of cardiovascular system

1. Heart-

a) Structure and properties of cardiac muscle

b) Cardiac metabolism

c) Enervation of Heart, Junction tissue of heart

d) Regeneration and spread of cardiac impulse

2. Electrocardiography

a) Einthoven's Law

b) Various ECG leads, normal ECG and its interpretation

c) Cardiac arrhythmias and heart block

d) Cardiac vector

3. Cardiac cycle

a) Pressure and volume change (mechanical events)

b) Heart sound and stethoscope

c) Principle of echo –cardiograph

d) Measurement and regulation of cardiac output

4. Heart sounds

a) Description, causation and relation to other events in cardiac cycle

b) Clinical significance of heart sounds

5. Blood Pressure

a) Definition, Regulation and factors influencing B.P.

b) Measurement of blood pressure

c) Physiology of hemorrhage and shock

6. Circulation

a) Blood vessels

b) Physical principle of blood flow, regulation of blood flow

c) Jugular venous pulse tracing, radial pulse tracing

d) Coronary, cerebral, renal and pulmonary circulation

e) Splanchnic, cutaneous and capillary circulation

IV. **RESPIRATORY SYSTEM**: -Introduction, internal and external respiration, physiological anatomy of respiratory system.

1. Mechanics of respiration

a) Inspiration and expiration
b) Role of respiratory muscles and thoracic cage
c) Pressure and volume change during respiration
d) Work of breathing, lung compliance and its significance in health and diseases.

2. Lung volumes and capacities

a) Lung volumes and capacities and their measurements
b) Respiratory minute volume and maximum voluntary ventilation

3. Alveolar ventilation composition of atmospheric, inspired, alveolar and expired air

4. Pulmonary circulation

a) Pulmonary circulation , ventilation –perfusion relationship
b) Diffusion of gases across pulmonary membrane
c) Oxygen uptake, transport and delivery
d) Carbon – dioxide uptake , transport and delivery

5. Organization of the respiratory centers

a) Nervous and chemical regulation of respiration
b) Classification and characteristics of hypoxia, cyanosis, asphyxia, hyper capnea, hypo capnea, dyspnoea, apnoea and orthopnea and periodic breathing.
c) Respiratory aspects of high altitude
d) Physiology of acclimatization and hyperbarrism
e) Respiratory / pulmonary function tests
f) Non- respiratory function of lungs
g) Artificial respiration

V. **DIGESTIVE SYSTEM**

1. Introduction, organization and plan of digestive system

2. **Saliva**

a) Composition, functions, regulation secretion
b) Methods of study of above aspects of saliva

3. Stomach

a) Functions of stomach
b) Composition and functions of gastric juice
c) Regulation of secretion and mechanism of HCL secretion
d) Gastric emptying time and its regulation
e) Methods of study of gastric function and its applied aspect.

4. Pancreas

a) Composition and functions of pancreatic juice
b) Regulation of pancreatic secretion
c) Methods of study of pancreatic secretion

5. Liver

a) Function, formation, storage and emptying of bile
b) Composition, function and regulation of release of bile
c) Entero - hepatic circulation
d) Tests for liver functions

6. Small intestine

a) Succus entericus
b) Composition, function and mechanism of secretions

7. Large intestine

a) Functions

8. Gastro- intestinal Hormones

a) Release and functions

9. Gastro- intestinal movements

a) Mastication, deglutition and vomiting
b) Movements of stomach and small intestines
c) Movements of large intestine and defecation
d) Regulation of movements and methods of study

10. Digestion and adsorption of carbohydrates, fats, proteins and vitamins, minerals and water

Paper II

I. **EXCRETORY SYSTEM**

1. **General introduction-** Organs of excretion with special emphasis on evolution of excretory mechanism
2. **Renal system**- Functional anatomy and renal circulation
3. **Nephron-**
    a) Mechanism of urine formation, glomerular filtration, tubular function
    b) Concentration and acidification of urine
    c) Composition of normal urine, and abnormal constituents or urine
    d) Renal function tests
4. **Non-excretory functions of kidney**
    a) Physiology of micturition and its abnormalities
5. **Skin**: - Structure and functions.

II. **ENDOCRINAL SYSTEM**

1. **Introduction**- Hormones, Evolutionary back-ground and organization of endocrine control systems
2. **Methods of study**
    a) Classification of hormones and mechanism of hormonal action
    b) Regulation of hormone secretion and feed-back system
3. **Hypothalamo-hypophyseal system**

    Releasing hormones

4. **Active principles**

a) Chemical nature, biosynthesis, role of action

b) Control of secretion, excretion and its aspect.

c) Clinical study of their hypo-and hyper function

d) Laboratory diagnosis of pituitary (anterior and posterior) gland, thyroid, parathyroid adrenal cortex and medulla and islets of langerhans.

III. **REPRODUCTIVE SYSTEM**

1. **Physiology of reproduction**

a) Introduction to physiology of reproduction

b) Sex determination and sex differentiation and chromosomal study

2. **Male reproductive system**

a) Growth, development and structure of testes

b) Gonadotropins and gonadal hormones

c) Functions of testes and spermatogenesis

d) Composition of semen

3. **Female reproductive system**

a) Ovary, Gonadotropins

b) Structure of ovary and corpus luteum

c) Function of ovary, ovarian hormones

d) Physiology of menstruation cycle and physiology of pregnancy

e) Physiology of placenta, gestation and parturition

f) Physiological basic of tests for ovulation and pregnancy.

4. **Physiology of lactation**

IV. NERVE MUSCLE PHYSIOLOGY

1. **Neurons**
   a) Morphology and measures of excitability
   b) Classification and properties of nerve fibers
2. **Muscle**
   a) Types of muscles and their properties and morphology
   b) Neuro-muscular junction, excitation - contraction coupling
   c) Myasthenia gravis
   d) Starlings law and its applications

V. CENTRAL NERVOUS SYSTEM

1. **Structural and functional organization of central nervous system.**
2. **Neuron**
   a) Neuralgia, functional types of neurons
3. **Cerebro-spinal fluid**
   a) Formation, circulation, functions of CSF
   b) Methods of collection and clinical significance of CSF
4. **Synapse**
   a) Types of synapses and their structure
   b) Sympathetic transmission
   c) General properties of neuro-transmitters

5. **Sensory Physiology**

   a) Classification and general properties of receptors

   b) Sensory modalities and stereo gnosis

6. **Reflexes**

   a) Reflex and general properties of reflexes (with examples)

7. **Ascending tracts**

   a) Origin, course, termination and functions

   b) Specific reference to pain pathway and physiology of pain

8. **Organization of motor systems**

   a) Pyramidal and extra-pyramidal system

   b) Upper and lower motor neurons and their lesions

   c) Brown-squared syndrome

   d) Syringomyelia

9. **Cerebellum**

   a) Functional anatomy, connections and functions

   b) Effects of lesions and tests for cerebellar function

10. **Basal ganglion**

   a) Functional anatomy connection and functions

   b) Diseases of basal ganglion and its clinical evaluation.

11. **Vestibular apparatus**

   a) Functions anatomy, connections and functions

   b) Effects of lesions and their assessment

   c) Physiology of maintenance and regulation of muscle tone, posture and equilibrium

   d) Decerebrated rigidity and righting reflexes

12. **Thalamus**

a) Functional anatomy, connections and functions

b) Effects of lesions of thalamus

13**. Hypothalamus**

a) Functional anatomy, connections and functions

b) Effects of lesions of hypothalamus

14. **Body temperature regulation**

a) Normal body temperature, pyrexia and hypothermia

15. **Cerebral cortex**

a) Functional anatomy

b) Methods of study of cortical functions

16**. Limbic system**

a) Functional anatomy, connection and functions

b) EEG, Physiology of sleep and wakefulness

17. **Higher functions**

a) Learning, speech, memory, behavior and emotions

VI. **AUTONOMIC NERVOUS SYSTEM**

1. Sympathetic nervous system
2. Parasympathetic nervous system

- Ida, pingala, sushamna evam shatchakra ka kriyatmak vivechan

VI. SPECIAL SENSE

- Jyanindriyo ki kriya vidhiyo ka gyan

1. Smell

a) Physiology of olfaction and olfactory discrimination

b) Olfactory pathway and defects of olfaction

2. Receptors, primary taste sensation and taste pathway

3. Vision

a) Functional anatomy of eye, extra and intra-ocular muscles

b) Errors of refraction and their correction, visual actually

c) Physiology of aqueous humor

d) Cornea, lens, intraocular pressure, accommodation

e) Retina, rhodopsin cycle, dark and light adaptation

f) Visual pathway and effects of lesions in visual pathways

g) Field of vision perimetry binocular vision

h) lris and papillary reflexes

i) Colour vision, colour blindness and tests for colour blindness

j) Formation and circulation of tears lacrimal glands

4. Hearing

a) Functional anatomy of ear, function of external ear

b) Physiological Functions of middle ear

c) Impedance matching and tympanic reflex

d) Functional anatomy of internal ear, cochlea, organ of corti

e) Auditory pathway and auditory cortex

f) Frequency analysis, sound localization defects of hearing

g) Audiometric tests for conduction defects, Aphasia

PRACTICAL

I. HAEMATOLOGY EXPERIMENTS

1. Collection of blood, study of fresh drop of blood, effects of isotonic, hypertonic and hypotonic saline on RBCs
2. Enumeration of RBCs (RBS Count)
3. Estimation of hemoglobin
4. Packed cell volume (PCV) and blood indices
5. Determination of Erythrocyte sedimentation rate (ESR)
6. Enumeration of WBC (Total Count)
7. Differential WBC count (Differential count)
8. Determination of clotting time and bleeding time
9. Enumeration of platelets (Platelet count)

II. HUMAN PHYSIOLOGY EXPERIMENTS

1. Recording of blood pressure in human beings and study the effects of exercise on blood pressure
2. Electrocardiography (Demonstrations)
3. Clinical examination of CVS and radial pulse
4. Determination of tidal volume, inspiratory reserve volume, expiratory reserve volume, inspiratory capacity expiratory volume (All experiments are to be arranged for demonstration)
5. Stethoscope, normal body temperature and its physiological variation
6. Pulse, respiration and temperature chart with correlation
7. Clinical examination of respiratory system
8. Plethysmography (Demonstration)
9. Clinical examination of CNS

a) Motor functions

b) Sensory functions

c) Cranial nerves

d) Reflexes superficial and deep

10 Determination of vital capacity and maximum ventilator volume with spirometry (Demonstration)

Note : The above 10 human physiology experiments are to be conducted with demonstration as a joint venture by physiologists and the clinical faculty, if necessary.

Recommended text books for physiology

1.Text book of Medical physiology by A.C. Guyton

2.Review of Medical physiology by W.F. Ganong

3.Concise text book of Medical physiology - S.K. Choudhary

4.Understanding Medical physiology -by Bijlani

5.Essentials of Medical Physiology -by Sembulingam

Reference Books

1.Best and Taylor's physiology basis of Medical practice

2.Practical physiology by Ghai

3.Practical physiology by Ranade.

PHILOSOPHY OF NATURE CURE

PAPER -1

- Evolution of human body
- Philosophy behind human body
- Composition of human body
- Comparative study of naturopathy with other systems
- Ayurvedic approach towards naturopathy
- Philosophy of Indian & foreign naturopaths
- Laws of nature
- Catechism of nature cure
- Swasthya vrittam
- Unity of diseases
- Toxemia
- Natural immunity (ways of acquiring it)
- Difference between functional and organic disease
- Material hygienica
- Philosophy of life
- Philosophy of health
- Body's protective mechanism
- Nutrition from food
- Philosophy of death

PAPER - 2

- Properties of elements
- Health and disease
- Role of diet in naturopathy
- Outline for healthy food
- Diagnostic in naturopathy
- Panchatantras
- Treatment modalities
- Crisis and their management
- Sleep repose
- Toxins
- Vaccination and inoculation
- Geriatric
- Family planning

PRACTICALS

Theory

PAPER -I

1 The evolution of the human body.

2 Philosophy of the body, mind, soul, spirit and spiritual body

3 a) Composition of the human body, according to Ayurveda, Naturopathy, Yoga, Modern Medicine & Homeopathy.

b) History and Fundamental (Basic) principles of Naturopathy

4 Comparative study of the Naturopathy with other systems of Medicine.

5 Ayurvedic Approach towards Naturopathy.

6 Philosophy of Indian Naturopaths

a. Vegiraj Krishnamraju

b. Mahatma Gandhi

c. Dr. S.J. Singh

d. Dr. B. Venkat Rao

e. Dr. k. Laxman Sharma

f. Sukhbir Singh 'Ravat'

7. Philosophy of Foreign Naturopaths.

a. Hippocrates

b. Vincent Priessnitz.

c. Sebastian Kneipp.

d. Arnold Rickil.

e. Louis Kuhne.

f. Adolf Just.

g. Henry Lindlahr.

h. Herbert M. Shelton

i. J.H. Kellog

j. Benedict Lust

8. Laws of Nature

a) Panchamahabhutas

b) Shareera Dharmas- Ahara, Nidra, Bhaya, Maithuna.

c) Inflammation and its different stages.

d) Natural rejuvenations.

e) Concept of disease according to Naturopathy

9. Catechism of Naturopathy

10 Swasthya Vritam :-

a) Dinacharya

b) Ratricharya

c) Ritucharya

d) Vegadharanam

11 Unity of disease unity of cure

12 Foreign matter and Toxins accumulation in the body and its importance in elimination through different ways of channels. (Toxemia/Foreign Matter Theory.)

13 Natural immunity (ways of acquiring it)

14 Difference between functional and organic diseases.

15 Materia-Hygienica

a. Importance of Physical & Mental Hygiene

16 The Philosophy of Life

17 The Philosophy of Health

a) Health Standards

b) Health status; Ancient era and current era.

c) Positive Habits

d) Vital Economy

e) Demolishers of Health [Tea, Coffee, Salt, Sugar, Tobacco Chewing smoking Alcohol Non-Veg (Animal Food), Excess Fat & Oil, Negative Thinking & attitude etc.

f) Internal Symbiosis

18 Body's Protective Mechanism

a) Digestion First Line of Defense Against Disease

b) The Liver second line of Defense Against Disease.

c) The Endocrine Glands Third line of Defense Against Disease.

19. Nutrition supplements from food

a) Food is the Healer

b) Let Food Be your Medicine

c) Wheat Grass - Health benefits

d) Salt Eating

20. Philosophy of Death

PRACTICALS

i. Students should be introduced to various treatment procedures used in Naturopathy.

ii. Practical with record.

iii. Visiting to various nature cure clinics/hospitals.

PAPER –II

1 Properties of Water, Mud, Air and Sunlight.

2 Health is Positive and Disease is Negative

3 Role of diet in Naturopathy and Yoga (Satvic, Tamsic, Rajsic)

4 Outline on a) Regular Habits for health b) Rest and Relaxation c) Live Food- Natural Raw diet d) Fasting e) Exercises.

5 The Diagnostic Procedures in Naturopathy & their Diagnostic Values :-

a) Facial Diagnosis

b) Iris diagnosis

c) Chromo Diagnosis

d) Spinal Analysis

6 Panchatantras and their importance in Restoration, Maintenance of Health and Prevention of Diseases.

7 Treatment Modalities in Nature Cure (in brief)

A. Enema

B. Colon Hydrotherapy

C. Hydrotherapy

i) Hip Bath

ii) Spinal Bath

iii) Spinal Spray

iv) Foot Bath

v) Arm Bath

vi) Contrast Arm & Foot Bath

vii) Steam Bath

viii) Sauna Bath

ix) Packs

x) Full Wet Sheet Pack

xi) Jacuzzi

xii) Sitz Bath

xiii) Full immersion Bath

xiv) Under Water Massage

xv) Douches

xvi) Cold Circular Jet Bath

xvii) Whirlpool Bath

xviii) Gastro Hepatic Pack

xix) Kidney Pack

xx) Oxygen Bath

D. Mud Therapy:-

i) Mud Packs ii) Mud Bath

E. Chromo therapy :- Color Treatment

i) Heat, Light, Ultra-violet and infra red rays

ii) Chromothermolium

F. Heliotherapy-

i) Sun Bath

ii) Athapasnana (Banana Leaf Bath)

G. Air-Therapy

i) Air Bath ii) Ozone Bath

H. Magnetotherapy

I. Massage Therapy

J. Aroma Therapy

K. Chiropractic

L. Osteopathy

M. Physiotherapy

8 Crisis and their Management

9 Sleep Repose

10 Toxins and anti toxins, Their generation & Mitigation in Naturopathy way

11 Vaccinations and Inoculation, Their ill effects on the human mind and body.

12. Old age problems and natural rejuvenation

13 Family planning by Natural therapeutics.

PRACTICAL

i. Students should have knowledge of giving various treatments.

ii. Demonstration of:-

(a) Natural Diet (Live food)

(b) Satvic boiled diet.

(c) Way of serving & various special diets.

iii. Practicals with Record

Text Books -

1.	Philosophy and practice of Nature Cure	- By Henry Lindlahr.
2.	Practical Nature Cure	- By Dr. K. Laxman Sharma
3.	My Nature Cure	- By M.K. Gandhi
4.	Introduction to Natural Hygiene	- By Herbert M. Shelton
5.	Return to nature	- Adolf Just

Reference Books

1	My Nature Cure or Practical Naturopathy	- By S.J. Singh
2	Ayurveda for health and long life	- By Dr. R.K. Grade
3	Everybody's guide to Nature cure	- By Harry Benjamin
4	Diet and Diet Reforms	- By M.K. Gandhi
5	Mucous less diet healing system	- By Arnold Ehret

BASIC PRINCIPLES OF YOGA

- History of Yoga
- Fundamental outlines of Yoga
- Kriyas
- Classification of Yogasanas
- Rules and Regulations
- Common Yoga protocol (World Yoga day)

PRACTICALS

THEORY

1. **History of development of Yoga**. (Pre-vedic time to present) Different definition of Yoga, Streams of Yoga Jnana Yoga, karma Yoga, Raj Yoga, Bhakti Yoga, Hath Yog, Lay Yoga.

2. **Fundamental outlines of Astanga Yoga.**

   a. Yama

   b. Niyama

   c. Asanas : Shirshasana, Vajrasana, Supta Vajrasana

      Paschimottanasana, Baddha Padmasana, Trikonasana, Ardhkrati and Kati Chakrasana, Padahastasana, Shavasana.

   d. Paranayama- Suryabhedana, Ujjayi, Bhastrika, Sheetkari, Sheetali Bharamari, Murcha, Plavini

   e. Prathyahara

   f. Dharana

   g. Dhyana

   h. Samadhi

3. **Kriyas**

i)	Neti	Jal, Sutra
ii)	Dhouti	Vamana
		Vastra
		Danda
iii)	Nauli	Madhya
		Dakshina & Vama

iv) Trataka Bindu

Jyoti

v) Kapalabhati

4. **Classification of Yogasana** - Beginners group, Intermediate Group, Advanced group, Dynamic and Static Yogasanas.

5. **Rules & Regulations to be followed for practicing Asanas difference between Yoga and Exercise.**

6. **World Yoga day** - Common Yoga protocol

6. Education: Its meaning, definition and goal, role and importance of education in Human Excellence.

7. Yoga in Education: Salient features of Yoga Education, Factors of Yoga Education: Teacher, Student and Teaching, Guru- Shishya- Parampara and its importance in Yoga Education.

8. Value Education: Its Meaning and Definition, Types of values, value –oriented Education in Personality Development.

9. Contribution of Yoga towards Development of Values, Spiritual Growth.

10. Salient features of Ideal Yoga Teacher, Role of Yoga Teacher in Value-oriented Education, Role of Yoga in development of healthy society.

PRACTICAL

1 Asanas

2 Kriyas

3 Pranayama

4 Dharana

5 Dhyana-Meditation

6 Practical's with records

Sarvanga Pushti

Hrid Gati (Engine run)

Sectional Breathing (Abdominal, Thoracic and Clavicular Breathing)

Practices leading to Dhyana Sadhana

- Body awareness and Breath awareness
- Yoga Nidra
- Antanmauna
- Recitation of Pranava and Sohama
- Recitation of Hymns
- Practice of Dhyana

Reference Books –

1. Sukshma Vyayama-Swami Dhirendra Brahmachari.
2. Basis and definitions of Yoga - Vivekananda Kendra.
3. Raja Yoga-Swami Vivekananda.
4. Asanas -Swami Kuvalyananda.
5. Asanas Pranayama Mudras & Bandhas -Swami Satyananda Saraswati.

BIOCHEMISTRY

- Introduction
- Hydrogen ion
- Principles of calorimetry
- Amino acids
- Peptides
- Proteins
- Collagen, myoglobin and hemoglobin
- Enzymes
- Carbohydrates
- Polysaccharides functions
- Lipids
- Nucleic acid
- Vitamins
- Minerals
- Cell and sub cellular structure
- Metabolism
- Biological oxidation
- Lipid metabolism
- Protein metabolism
- Purine & pyrimidine metabolism
- Biochemical genetics
- Biochemistry of blood
- Liver functions
- Kidney function test
- Energy metabolism
- Electrolyte and water metabolism

PRACTICALS

THEORY

1. **Introduction and prospects**.

2. **Hydrogen ion** concentration, acids, base, buffers, Henderson-Haselbasch Equation.

3. **Principles of Calorimetry**, paper chromatography and Electrophoresis.

4. **Amino Acids** - Classification, structure, properties and side chains of amino acids.

5. **Peptides -** Biological importance of peptides structure of Insulin.

6. **Proteins** - Definition Biological importance classification and properties structure of proteins coagulation and denaturation of proteins.

7. **Elementary aspects of the structure of collagen, Myoglobin and Hemoglobin.**

8. **Enzymes-**Definition classification specificity coenzymes co-factors and activators diagnostic importance of enzymes and iso-enzymes.

9. **Carbohydrates-**Definition classification and biological importance of Monosaccharide-classification properties and stereoisomerism, oligosaccharides-importance of Disaccharides.

10. **Polysaccharides functions.**

11. **Lipids** - Definition classification and biological importance.

    1. Simple lipids: Composition of triglycerol, Waxes.

    2. Compound lipids: Functions of fatty acids - Properties and saturates and unsaturated fatty acids.

12. **Nucleic acid** - Definition classification, composition and biological importance of nucleic acids purine and pyrimidine bases structure of DNA

13. **Vitamins -** Definition and classification.

14. **Minerals** -Calcium Phosphorous iron cooper zinc magnesium manganese lead mercury arsenic and metal toxicity fluorine and iodine.

15. **Cell and sub cellular structures**: - Cell membrane, its composition function of sub cellular structures, transport across cell membrane, Active and facilitated diffusion.

16. **Metabolism** - Digestion and adsorption of carbohydrates, lipids, proteins and nucleic acids.

17. **Carbohydrate Metabolism** - Glycogenesis, glycogenolysis and Krebs's cycle, glycoysis, private oxidation citric acid cycle , Gluconeogenesis , Metabolism of fructose and Galactose, regulation of metabolic pathways, disorders of carbohydrate metabolism, regulation of blood sugar, glucose tolerance test, diabetes mellitus.

18. **Biological oxidation** - oxidative phosphorylation.

19. **Lipid Metabolism** - Lipogenesis, synthesis of fatty acids, denaturation, Phospholipids, Biosynthesis of lecithin, Cephalic and utilization of Ketone bodies, ketosis, synthesis and utilization of ketone bodies, ketosis, synthesis and breakdown of cholesterol, disorders of lipid metabolism, outlines and formations of prostaglandins and leucotrienes, fatty liver and lipotropic factors.

20. **Metabolism of proteins and amino acids** - Breakdown of tissues proteins, amino acids pool, general metabolism of amino acids, disposal of ammonia, urea cycle formation of glutamate and glutamine, disorders of amino acid metabolism.

21. **Purine and Pyrimidine metabolism** - Outline of synthesis and breakdown of purine and pyrimidine, Disorders of metabolism of purine and pyrimidine.

22. **Biochemical genetics and protein synthesis** - Replication, transcription, reverse transcription viruses, oncogenes, post transcription modification.

23. **Biochemistry of blood** - Outline of synthesis and degradation of haem function of Haemoglobin, abnormal haemoglobin, Jaundice, importance, functions and separation of plasma proteins, Functions of immunoglobulin, regulation of Ph of blood, role of kidney and lungs in maintaining Ph of blood, acidosis and Alkalosis.

24. **Liver function** - Liver Function tests, Detoxification mechanisms.

25. **Kidney Function Tests** - Composition of Urine, Urea Clearance and creatinine Clearance.

26. **Energy metabolism (BMR)** - Basal metabolic rate and its importance, calorific values of blood, balanced diet, protein energy malnutrition (PEM), essential fatty acids, dietary habits and diseases, biochemistry of starvation.

27. **Electrolytes and water metabolism**.

PRACTICALS

SECTION - I

1. Indicators.
2. Reactions of monosaccharide - Glucose and fructose.
3. Reactions of disaccharides - Lactose, Maltose and sucrose.
4. Reactions of polysaccharides - Starch and dextrin.
5. Reactions of Proteins - albumin, casein, gelatin.
6. Coagulation and Precipitation and reactions of Proteins.
7. Reactions of Non Protein Nitrogen (NPN) - Urea, Uric acid and creatine.
8. Analysis of Milk.
9. Normal Constituents of urine.
10. Analysis of abnormal urine.

SECTION -II

1. Determination of

   a) Blood Sugar
   b) Blood Urea
   c) Total Serum Protein
   d) Total Serum Calcium
   e) Total Serum Cholesterol
   f) Total Serum Billirubin

2. Determination of

   a) Sugar in CSF
   b) Proteins is CSF
   c) Chlorides in CSF

3. Determination of albumin and urea in urine
4. Determination of SGOT and SGPT

5. Determination of principles of

a) Calorimetry and calorimeter

b) Paper chromatography

c) Electrophoresis

d) Glucose Tolerance Test (GTT)

e) Flame Photometry

Recommended Text books for Biochemistry

1. Text book of Biochemistry -By Ramkrishna, Prasana and Rajan
2. Biochemistry for medical students - By Debajyothi Das.
3. Text book of Biochemistry - By Rama Rao .
4. Text Book of Biochemistry - By Satyanaryan.

Reference Book –

1. Harper's review of physiological chemistry - By Harper
2. Text Book of Biochemistry - By Lubert Stryer
3. Biochemistry - By Albert Lehniger.
4. Text Book of Biochemistry - By West & Todd.
5. Laboratory manual of Biochemistry - By Rajgopal & Ramkrishanan.

SANSKRIT

- Varna, vakya, sangya, sutra , uccharan
- Importance of Sanskrit
- Introduction to Bhagwadgita
- Sandhi vicched
- Karak prakaran, sutro ki vyakhya
- Samas prakaran

इकाई–1– (क) वर्ण,वाक्य,संज्ञा,सर्वनाम,उपसर्ग,शब्दार्थ

(ख) माहेश्वर सूत्र, उच्चारण स्थान

इकाई–2– (क) संस्कृत का महत्व व अन्य विषयों के साथ सम्बन्ध

(ख) भगवद्गीता का प्रेतिहासिक परिचय व महत्ता, गुणातीत अवस्था, आनन्द के स्तर, निष्काम कर्म

इकाई–3– <u>सन्धि – विच्छेद व सूत्रों की व्याख्या–</u>

अकः सवर्णे दीर्घः, इकोयर्णाच,आद्गुणः, अदेङ्गुणः, वृद्विरेचि,वृदिरादैच्, पुचोऽन्ते, स्तोः श्चुना श्चुः , ष्टुनाष्टुः, अतोरोरालुतादप्लुते, विसर्जनीयस्य सः,ससजुषोरूः,योऽनुनासिकेऽनुनासिको वा, खरि च, खखसानयोविसर्जनीयः

इकाई–4– (क) **कारक प्रकरण सूत्रों की व्याख्या तथा उदाहरण– विषयक – प्रश्न – :**

प्रातिपदिकार्थ लिङ्परिमाणवचनमात्रे प्रथमा, सम्बोधने च, कर्तुरीप्सिततमं कर्म , अकथितं च, अभितपरितसमयानिकषाहा– प्रतियोगेऽपि, अन्तरान्तरेणयकुक्ते, अधिशीङ्स्थासां कर्म, उपान्वध्याङ्वसः, अभिनिविशश्च,कालाध्वनोरत्यन्तसंयोगे, कर्मणिद्वितीया, साधकतमं करणम्, येनाXविकार,सहयुक्तेऽप्रधाने, इत्थंभूतलक्षणे, हेतौ, निषेधार्थकर्म, अपवर्गे तृतीया, कर्तृकरणयोरतृतीया, कर्मणायमभिप्रैति स, सम्प्रदानम्,खच्यर्थानां प्रीयमाणः, क्रुधद्रुहेर्ष्यासूयार्थानां यं प्रति कोपः, स्पृहेरीप्सितः नमः स्वस्तिस्वाहास्वधानलवषऽयोगाच्च, धारेरूत्तमर्णः, चतुर्थी सम्प्रदाने, ध्रुवमपायेऽपादानम्, भीत्तार्थानां भयहेतुः, जुगुप्साविरामप्रमादार्थानामुपसंख्यानम्,भुवः प्रभवः, जनिकर्तुः प्रकृतिः, अपादाने पंचमी, यतश्चनिधरिणम्, दूरान्तिकार्थैः षष्ट्यन्यरस्याम्, षष्ठ्यतसर्थप्रत्ययेन, षष्ठीशेषे, आधारोऽधिकरणम्, यस्य च भावेन भावलक्षणम्

(ख) **शब्द रूप**– राम, रमा, फल, हरि, गुरू,नदी, मति, अस्मद्,युस्मद्, पुक, द्वि, त्रि।

(ग) **धातुरूप –** पठ्, वद्,गम्,भू, कथ् , नम्, नश्, कृ, धातुओं के लट्, लोट्,लङ्,विधिलिX, लृट् में रूप सम्बन्धी प्रश्न।

इकाई –5 – <u>समास प्रकरण – विग्रह – समस्तपद एवं समससनाम–</u>

प्रायेणपूर्वपदार्थप्रधानोऽवययीभावः, प्रायेणेत्तरपदार्थप्रधानस्तत्पुरूषः, पञचमी भयेन, सप्तमीशौण्डैः, कर्तृकरणेकृताबहुलम्, चतुर्थीतदर्थार्थबलिहितसुखरक्षितैः, विशेषणं विशेष्येण बहुलम्, संख्यापूर्वो द्विगुः, नञ, सप्तमीविशेषणेबहुब्रीहौ, अनेकमन्यपदार्थे, चार्थेद्वन्द्वः।

SYLLABUS & CURRICULUM

FOR

BACHELOR OF NATUROPATHY AND YOGIC SCIENCES

II YEAR

Duration One Year

1 **PATHOLOGY**

2 **MICROBIOLOGY**

3 **YOGA PHILOSOPHY**

4 **CHROMO AND MAGNETO THERAPY**

5 **COMMUNITY HEALTH & MEDICINE**

6 **BASIC PHARMACOLOGY AND PHARMACOGNOSY**

PATHOLOGY

General pathology

- History and scope of pathology
- The cell
- Cell injury
- Inflammation and repair
- Chronic inflammation
- Wound healing
- Gangrene
- Granulomas
- Fluid and hemodynamic changes
- Immunopathology
- Growth and its disorders
- Neoplasia

Systemic pathology

- Disorders of RBC
- Disorders of WBC
- Coagulation and bleeding disorders
- Diseases of cardiovascular system
- Diseases of respiratory system
- Diseases of digestive system
- Diseases of liver, Biliary tract and Pancrease
- Diseases of kidney
- Diseases of male reproductive system
- Diseases of female reproductive system
- Diseases of breast

- Endocrinal disorder
- Musculoskeletal pathology
- Diseases of nervous system
- Diseases of lymph nodes and spleen
- Pathology of skin
- Pathology of ENT
- Rogi pariksha vidhiya
- Clinical pathology

PRACTICALS

THEORY

GENERAL PATHOLOGY

1 **History and scope of Pathology** -

a) Definition and Various branches in Pathology

b) Scientific Study of disease and methodology

2 **The cell and the reaction of cell, tissue and organ to injury.**

a) Structure of cell and its function.

b) Causes and nature of cell injury.

3 **Reaction of cell to injurious agents**

a) Lethal injury - Necrosis and gangrene

b) Cloudy swelling

c) Fatty changes in Liver, heart and kidney

d) Glycogen infiltration and hyaline degeneration.

e) Lipoid degeneration.

f) Mucoid degeneration.

g) Pathological Calcification

4 **Inflammation and Repair :**

a) Definition, Classification and nomenclature.

b) Acute inflammation:- Vascular and cellular phenomenon, cell of exudates chemical mediators and tissue changes in acute inflammation cardinal signs of acute inflammation, types and systemic effects of acute inflammation.

5 **Chronic Inflammation**

a) Difference between acute and chronic Inflammation

b) Definition of Granuloma.

6 **Wound healing**

a) Regeneration and Repair

b) Repair of epithelial and mesenchymal tissue

c) Primary Union and secondary union

d) Mechanism involved and factors modifying repair process.

7 **Gangrene** - Causes, Dry Gangrene, Moist Gangrene, Gas Gangrene

8 **Granulomas :-**

a) Classification of Granulomas

b) Tuberculosis - Genesis and fate of tubercle, primary and secondary tuberculosis.

c) Definition, Classification and Pathology of Leprosy.

d) Acquired, Primary, Secondary and Tertiary stages of syphilis.

e) C.N.S. Syphilis, C.V.S. syphilis and Gumma, Congenital Syphilis.

f) Actinomycosis, maduramycosis and rhinosporidiosis

9 **Fluid and Hemodynamic Changes (Circulatory disturbances):-**

a) Hyperemia, Congestion and hemorrhage.

b) Thrombosis, embolism, DIC.

c) Ischemia, Infarction and shock

d) Edema.

10 **Immunopathology –**

a) Basic Pathological mechanism in autoimmune disorders.

b) Concept of immunodeficiency disorders.

c) Pathology of AIDS.

11 **Growth and its disorders-**

a) Definition of Agenesis, aplasis, atrophy, Hyperplasia, Hypoplasia, Metaplasia.

b) Concept of dysplasia, anaplasia and carcinoma-in-situ.

12 **Neoplasia :**

a) Definition, Classification and Nomenclature.

b) Characteristic features of benign and malignant tumors.

c) Route of spread of malignant

d) Grading and staging of cancers and pre-cancerous conditions.

e) Carcinogenesis and carcinogens.

f) Laboratory diagnosis of cancer-B

SYSTEMIC PATHOLOGY

1. **Disorders of RBC**

   a) Definition morphologic and etiopathological classification of anemia. Iron deficiency anemia, B-12 and foliate deficiency anemia, sickle cell anemia, post-hemorrhagic anemia.

   b) Concept and classification of hemolytic anemia.

   c) Laboratory investigations in anemia.

2. **Disorders of WBC**

   a) Leukopenia and leukocytosis.

   b) Agranulocytosis and Tropical Eosinophilia.

3. **Coagulation and bleeding disorders**

   a) Structure function and pathology of platelets.

   b) Definition and classification of blooddyscrasia.

   c) Laboratory investigations in bleeding disorders.

4. **Diseases of Cardiovascular System**

   a) Arteriosclerosis and Atherosclerosis.

   b) Aneurysm.

   c) Rheumatic heart disease, Endocarditis, Myocardial Infarction.

   d) Congenital heart diseases.

   e) Congestive cardiac failure.

5. **Diseases of Respiratory System**

   a) Lobar Pneumonia, bronchopneumonia, Pulmonary Tuberculosis.

   b) Bronchiatesis and Pneumoconiosis.

   c) Tumors of lung.

6. **Diseases of Gastro-intestinal system**

a) Pleomorphic,adenoma of salivary gland.

b) Barrett's Esophagus.

c) Gastritis and peptic ulcer and tumors of stomach.

d) Inflammatory bowel diseases-Crohn's disease, ulcerative colitis, typhoid ulcer.

e) Mega colon and Tumors of colon

f) Malabsorption syndrome, tropical sprue and coeliac disease.

g) Amebiasis, bacillary dysentery and intestinal tuberculosis.

7. **Diseases of liver, biliary tract and pancreas**

a) Liver function tests and hepatic failure viral hepatitis.

b) Cirrhosis of liver tumors of liver.

c) Alcoholic liver diseases.

d) Indian childhood cirrhosis.

e) Cholecystitis and Gallstones.

f) Pancreatitis and Diabetes Mellitus.

8. **Disease of Kidney**

a) Renal function tests, Renal Failure, Polycystic kidney.

b) Acute glomerulonephritis, Cresentric Glomerulonephritis Membranous glomerulonephritis, Nephrotic syndrome.

c) Chronic glomerulonephritis, acute tubular necrosis.

d) Pyelonephritis, Kidney in hypertension.

e) Tumors of Kidney.

9. **Diseases of Male Genital system**

a) Orchitis and testicular tumors.

b) Nodular hyperplasia of prostate, carcinoma of prostate.

c) Carcinoma of penis.

10. **Diseases of Female Reproductive Systems**

    a) Endometrial Hyperplasia, adenomyosis and endometriosis.

    b) Carcinoma of cervix, tumors of ovary.

    c) Carcinoma and other disease of vulva and uterus.

11. **Diseases of Breast**

    a) Fibrocystic disease and tumors of breast.

    b) Gynecomastia.

12. **Endocrine Pathology**

    a) Endocrinal lesions in brief mainly stressing on thyroid and Pheochromocytoma.

13. **Musculoskeletal Pathology**

    a) Osteomyelitis and Osteoporosis.

    b) Rickets and Osteoporosis.

    c) Tumors of Bone.

    d) Rheumatoid Arthritis, Gout.

    e) Myasthenia gravis and Progressive muscular dystrophy.

14. **Diseases of Nervous System**

    a) Meningitis Tumors of CNS.

    b) Tumors of Peripheral Nerves.

    c) Encephalitis.

15. **Disease of Lymph nodes and spleen**

    a) Lymphadenopathy.

    b) Malignant Lymphoma, Basal cell cracinoma.

16. **Pathology of Skin**

    a) Squamous cell carcinoma Basal cell carcinoma.

    b) Malignant Melanoma.

    c) Warts, Molluscum Contagiosum.

d) Fungal diseases.

17. **Pathology of Eye.**

18. **Pathology of ENT.**

- Rogi pariksha vidhiya- Trividh Asthavidh Dasvidh

19. **Clinical Pathology Including Clinical Hematology & Clinical Bio-Chemistry.**

1 Sample collections for various hematological and clinical pathological investigations and anticoagulants used.

2 Theoritical aspects of Hb estimation hematocrit, blood indices, ESR and normal values in Hematology.

3 Blood grouping concept of blood groups.

a) Selection of donor, major and minor-cross matching.

b) Blood transfusion, diseases transmitted by transfusions.

c) Coomb's test

4 CSF Analysis

5 Semen Analysis

6 Urine analysis and microscopy

7 Liver Function tests.

8 Renal function tests.

9 Glucose tolerance test.

10 Exfoliative cytology.

PRACTICALS

1 **Hematology :-**

1 Blood groups (A.B.O. System)

2 Estimation of hemoglobin

3 Enumeration of RBCs (R.B.C. Count)

4 Total leukocyte count (total count)

5 Differential leukocyte count (D.L.C.)

6 Peripheral smear staining and reporting

7 Absolute eosinophil count

8 Demonstration of

a) Hemogram in anemia

i) Iron deficiency anemia.

ii) Macrocytic anemia.

b) Hemogram in Leukemia

i) Acute types.

ii) Chronic types.

9 Slide study of :-

a) Acute myeloid leukemia.
b) Chronic myeloid leukemia.
c) Chronic lymphatic leukemia.

II. **SPOTTERS :-**

A. HAEMATOLOGY SLIDES

1. Microcytic Hypochromic Anemia.
2. Macrocytic Anemia
3. Dimorphic Anemia.
4. Acute Leukemia.
5. Chronic Myeloid and Chronic Lymphatic Leukemia.
6. Eosinophilia.

B. **HISTO-PATHOLOGY SLIDES FOR DISCUSSION**

1. Acute Appendicitis.
2. Lobar Pneumonia.
3. T.B. Lymphadenitis.
4. Lipoma, Fibroma, Squamous Papilloma.
5. Squamous Cell Carcinoma.
6. Adenocarcinoma.
7. Osteosarcoma, Osteoclastoma.
8. Pleomorphic Adenoma.
9 Teratoma, Seminoma of Dysgerminoma.
10. Cystic Glandular Hyperplasia
11. Proliferative Hyperplasia.
12. Secretory Endometrium.

C. **INSTRUMENTS FOR SPORTTING**

1. Wintrobe's Tube.
2. Westergren.
3. RBC pipette.
4. WBC Pipette
5. Lumbar Puncture Needle.
6. Liver biopsy Needle.

III. **MORBID ANATOMY**

1. Acute Appendicitis.
2. Lobar Pneumonia.

3. TB Lung.
4. Gastric Ulcer
5. Carcinoma Stomach.
6. Carcinoma Breast
7. Atherosclerosis.
8. Dermoid Cyst of Ovary
9 Seminoma Testis.
10. Chronic Pyelonephritis.

IV CLINICAL PATHOLOGY

1. Examination of urine for :
   a) Sugar, Ketone Bodies.
   b) Protein and Blood.
2. Semen Analysis
3. Pregnancy Test
4. Liver Functions Test.
5. Fractional Test meal.
6. Glucose tolerance test.

Recommended Text Books for Pathology

1.Pathological Basis of Disease - By Robbins, Cotran and Kumar

2. Text Book of Pathology - By N.C. Dey

3. Text Book of Pathology - By Harsh Mohan

Reference Books-

1. Text Book of Pathology - By Anderson
2. Systemic Pathology - By Symmers
3. Medical Laboratory - By Ramnik Sood
4. Pathology - By Boyd
5. The science and fine art of Disease Process (Orthopathy) - Herbert M. Shelton

MICROBIOLOGY

- General bacteriology
- Immunology
- Systemic bacteriology
- Parasitology
- Virology
- Mycology
- Applied microbiology

PRACTICALS

Theory

1. **General Bacteriology :-**

   a) Historical Introduction.

   b) Morphology and Physiology of Bacteria.

   c) Sterilization and Disinfection.

   d) Cultivation of Bacteria.

   e) Bacterial Growth and Multiplication.

   f) Basic Principles of Bacterial Genetics.

2. **Immunology:-**

   a) Inflection and Immunity.

   b) Immunoglobulin and Immune Responses.

   c) Immune system and antigen-antibody response.

   d) Compliment and other serological tests.

   e) Hypersensitivity.

   f) Basic Principles of Auto Immunity.

3. **Systemic Bacteriology-**

   Streptococcus, Staphylococcus and Pneumococcus Gonococcus Meningococcas. Yesinia, ,Clostridium,Hemophilus, Bordetella, Mycobacterium, Spirochaetes, Yersinia, chalamydia,Chlamydia.Corynaebatterium

4. **Parasitolgy-**

   a) Protozoology

      Entamoeba and Plasmodium

   b) Helminthology-

      Ancylostoma. Ascariasis, Taenia, Wuchereria.

5. **Virology-**

a) General properties-of virus and their diagnosis.

b) Herpes, Adenovirus, Picorna, Hepatitis Virus.

c) Poxvirus, Rabies Virus, Poliovirus, HIV, Bacteriophage.

6. **Mycology**

a) General Characters and methods used of study and diagnosis of fungal infections.

b) Superficial mycoses, systemic mycoses, candidiasis, Aspergillosis, Mycetoma, Rhinosportidiosis.

7. **Applied Microbiology**

a) Normal bacterial flora of human body.

b) Diagnostic methods in common diseases.

I) Meningitis, UTI ,PID, Gastroenteritis, Respiratory Infection.

ii) Urogenital Infections, Pyogenic Infections, Nosocomial Infections, Infections of Ear, Eye and Oral Cavity.

c) Bacteriology of Water

PRACTICALS

1 Microscopes and Microscopy.

2 Sterilization and Disinfection.

3 Morphology of Bacteria

4 Culture media.

5 Culture Methods.

6 Staining of Bacteria.

a) Grams staining
b) Albert's staining
c) Z-N Staining

7 Stools Examination

8 Identification of Bacteria

9 Demonstration of V.D.R.L. Test

10 Demonstration of Widal test.

Text Books

1 Text book of Microbiology- By R. Anatha Narayana & C.K. Jayaram Paniker
2 Parasitolgy By Jayaram Panikar
3 Bacteriology - By Dey
4 Text book of microbiology- By Chakravarthy
5 Text book of microbiology – By Dr. C.P.Baveja

Reference Books

1 Parasitolgy - By Chattarjee
2 Practical Microbiology - By R. Cruick Shank
3 Clinical Microbiology - By Bailey and Scott
4 Medical Laboratory Manual
For Tropical Countries
Vol. I and II - By Monica Cheesbrough

YOGA PHILOSOPHY

- Yoga, its purpose and philosophy
- Indian philosophy
- Historical highlights
- Philosophical nature of man
- The theory of body mind and soul
- Indian psychology
- Philosophical values of Astang Yoga
- Spiritual values of pranayama
- Importance of sayam
- Indian Yogic masters

PRACTICALS

Theory

1. Yoga, its definition, its, basis, purpose, its, relation to philosophy and its application.
2. Contemporary Indian Philosophies, Sad Darshan, similarity of sad darshan and Yoga.
3. Historical highlight of Yoga-Practices and literature from the ancient to modern times with special reference to nature of Yoga in Upanishads, smrithis and puranas, Panchakosha Vivek and Ananda Mimamsa.
4. Concept of Ishwara and its relevance in Yogasadhana, qualities of Ishwara, Ishwarapranidhana.
4. Introduction to Prasthanatrayee, Purushartha Chatushtaya and goal of human life.
4. The philosophical Nature of Man and his essence, destiny in concept of Yoga.
5. The theory of Body, Mind, Life and Nature of soul and evidence for the existence of soul.
6. Basic concepts of Indian Psychology-definition a brief history of psychology, contemporary psychology according to Freud, Mr. Woodsworth and various Psychologists Yogic science in relation to Psychology. cognitive process: Its meaning and nature.
7. Philosophical value of Ashtanga Yoga (8 Limbs of Yoga by Patanjali), Concept of Kriya Yoga of Patanjali and its importance for healthy living.
8. Yoga tradition in Jainism: Syadvada (theory of seven fold predictions); Concept of Kayotsarga / Preksha meditation).
9. Yoga Tradition in Buddhism: concept of Aryasatyas (four noble truths).
8. Spiritual values of Pranyama and Kriyas, their methods importance rules and regulations.
9. Importance of Sayam.

10. Philosophy and contribution in development of Yoga of, Adisankaracharya, Ramanujan, Maharshi Dayanada Saraswati, Ramakrishna Paramahansa, Swami Vivekananda, Swami Kaivalyanada, Ramana Maharshi, A.C. Bhakti Vedanta Prabhupada, Jiddu Krishna Murthy, Swami

Shivananda , Paramhansa Madhavadas ji, Yogacharya Shri T. Krishnamacharya).

Buddha, Mahavir, Shri Aurabindo.

PRACTICALS

Loosening exercises (Shitlikarna Vyayama) & Breathing exercise all exercises from Asanas pranayama Kriya- Vivekanada Kendra Publication.

Concept and Principles of Sukshma Vyayama, Sthula Vyayama, Surya Namaskars and their significance in Yoga Sadhana.

Introduction to Yogic relaxation techniques with special reference to Yoga Nidra.

i) Yogasanas

1. Siddhasana.	2. Padmasana.
3. Bhadrasana.	4. Samasana.
5. Swastikasana.	6. Vajrasana.
7. Simhasana.	8. Gomukhasana.
9. Virasana.	10. Ardha Matsyedrasana.
11. Vakrasana.	12. Paschimottasana.
13. Ustrasana.	14. Uttitapadasana.
15. Shalabhasana.	16.Paranmuktasana
17. Viparitakarani Asana.	18. Sarvangasana.
19. Dhanurasana	20. Halasana
21. Matsyasana	22. Kurmasana
23. Kukkutasana	24. Mayurasana

25. Sirsasana 26. Trikonasana

27.Ardha Katchakrasana 28. Parshava Konasana

29. Konasana 30. Katichakrasana

31. Padhastasana 32.Savasana

33. Makarasana 34.Baddhapadmasana

35. Naukasana 36.Chakrasana

37. Garudasana 38.Akarna Dhanurasana

39. Janusirshasana 40.Suptavajrasan

41. Padangusthasana 42. Karnapidasana

43. Tolangulasana 44. Garbhasana

45. Yoganidhrasana

ii) Pranayama

1. Anuloma Viloma.
2. Nadi Suddhi.
3. Ujjayi.
4. Sheetali.
5. Shitakari.
6. Bhastrika.
7. Bhramari.
8. Suryabhedana.
9. Chandrabhedana.
10. Sadanta.

iii) Kriyas

1. Neti- Jal and Sultra.
2. Dhouti Vamana and danda.
3. Trataka- Jyoti and Bindu.
4. Kapalabhati.

iv) Meditation (Dhyana)

1. Cyclic Meditation
2. Omkara Meditation.

Books Recommended

1. The History of Yoga- Vivian Worthintion
2. Yoga and Indian Philosophy - Karel wemer
3. Jnana Yoga, Bhakti Yoga. Karma Yoga, Rajaj Yoga, By Swami Vivekananda (Vivekananda Kendral Publication)
4. Light on Pranyama- B.K.S. lyenger
5. Hatha Yoga Pradipika -Swami Muktibodhanada

CHROMOTHERAPY AND MAGNETOTHERAPY

Chromo therapy

- Introduction
- Theory of light and force
- Chromo philosophy
- Source of light
- Chromo chemistry
- Chromo diagnosis
- Chromo therapeutics
- Practical instruments
- Directions to be followed while giving treatment
- Healing by means of natural substances
- Chromotherapy
- Bordeaux medicine
- Air therapy
- Sun therapy

Magneto therapy

- Introduction
- Magnetism
- Effects of magnetism
- Bio-magnets
- Magnetic influence
- Magnets and their composition
- Technique of application of magnets
- Magnetized water

- Advantage of magneto therapy
- Magneto therapy and acupressure
- Important terminology
- Recent development in Magnetotherapy

PRACTICALS

A) CHROMOTHERAPY

Theory

1. **Introduction**
   a) Historical Highlights
   b) Harmonic laws of the universe
   c) Solar Family.
2. **Theory of light and force**
3. **Chromo philosophy** - Reflection, Refraction Absorption
4. **The source of light the sun forming sources the solar atmosphere**-sum power - the color effects and -influence of sun light on skin, muscles, digestive organs and Bones.
5. **Chromo-chemistry** character of spectrum analysis materials discovered by the spectroscope the spectrum-spectrum of grey and natural color elements spectra of elements of positive colors chromatic repulsion and attraction.
6. **Chromo-diagnosis and chromo-hygiene.**
7. **Chromo-therapeutics**- The healing power of color healing power or red yellow, orange, blue green and violet non spectral colors sun stroke action of sun light on micro-organisms.
8. **Practical instruments for color healing** -Blue Green and Violet Red Pink Yellow Orange glasses the solar thermoleum the electro thermoleum, the chromo lens-chromo- light eradicator.
9. **Directions to be followed during treatment with light.**
10. Healing by means of substances charged with different colored light method of solarization of water, oils and food substances etc.
11. **Chromo-therapy** prescriptions for different diseases.
12. **Bordeaux medicine.**

1. Composition of Air-Night and Day Composition
2. Ozone in the atmosphere.
3. Air Pollutants, their acceptable values.
4. Physiology of Respiratory system.
5. Air baths (Cold and Hot)
6. Theory of Panchapranas and Nadis.

SUN THERAPY

(Helio Therapy)

1. History.
2. Physiological and Chemical Properties of Sunlight.
3. Effect of sunlight on vegetation and Micro-organism.
4. Rejuvenation during diseases.
5. General Sun Bath.
6. Dr. Rikli's method of sun bath.
7. Dr. Kuhn's method of sun Bath.
8. Sun Bath through wet pack.
9. Sun bath of children and aged persons.
10. Sunbath with banana leaves
11. Oil sun bath (Abhyanga snana)
12. Sun Stroke.
13. Practice of Exercise in sunlight.

Practical

Students should have demonstration classes in various chromo therapeutic devices and their clinical application.

1. Case studies with record.
2. Cases with bio-chemical reports
3. Demonstration of color glasses and bottles.
4. Demonstration of instruments and equipments.

Text Books

1. The principles of light and color - By. Dr. E.D. Babbit
2. Human culture and cure in five parts - By Dr. E.D. Babbit
3. Color therapy - By R.S. Amber
4. Healing through color - By Thea-Gimbel

Reference Books-

1. The power of the rays - By S.G.J. Oseley
2. Color and healing - By Gladya Mayer
3. All You wanted to know about sun therapy. - Vijaya Kumar
4. Color Therapy Miracle of Sunrays - Rashmi sharma and Maharaj - Krishna Sharma

MAGNETOTHERAPY

THEORY

1. **Introduction -**

   a) Definition of Magneto therapy.

   b) Historical highlights.

   c) Use of magnets upheld by Naturopathy.

2. **Magnetism in the Universe-**

   a) Earth a huge natural magnet.

   b) Nature of Earth Magnetism.

   c) Earth magnetic effects on the human beings.

3. **Effects of Magnetism on living organisms.**

4. **Bio-magnets**- Biological experiments with magnets.

5. **Medical influence of magnetic field:-**Rheumatoid arthritis, hemiplegia, arthralgia, Neuralgias, Stimulation of nervous system, endocrine gland etc.

   Magnetotherapy, symptomatic relief, combined treatments i.e. Magnetotherapy, Hydro-therapy, Massage, Diet & Yoga and the result of these combined treatments.

6. **Magnets and their composition** -

   a) Natural magnets and artificial magnets.

   b) Permanent magnets - classification of magnetic materials power of magnets various qualities of magnets - low medium and high power magnets and magnetic belts etc.

   c) Electro magnets- electromagnetic field on human behavior, Electro magnets- fro medical purpose - electromagnetic treatment bed and hard magnetizer, foot magnetizer, vibro electro massager, electro-magnetic chair etc Non pulsating clinical Electro magnet.

7. **Technique of application of magnets** - North and South pole, local and general treatment and the Technique of application of Magnets in treatment of various common diseases.
8. **Magnetized water and Magnetized oils**- Magnetized water in Nature, Influence of magnetic field on the properties of water, method and preparation of magnetized water, dosage and therapeutic effect of magnetized water method of preparation of magnetized oils their application and therapeutic effects.
9. **Advantages of Magneto Therapy, Magneto therapy is a natural treatments** - Use of Magnets as a preventive device.
10. Clinical Reports from Indian and Foreign Magneto Therapists.
11. **Magneto Therapy and Acupressure**-Acupuncture Points-Certain clinical case reports Utilization of Acupuncture points in Magneto therapy.
12. **Terminology-**Technical terms related to Magnetotherapy.
13. Recent developments in Magneto therapy.

PRACTICALS

Students should have demonstration classes in various types of Magnets equipment and their clinical application.

1. Case Studies with record.
2. Cases with bio-chemical reports.

Text Books-

1. Magneto therapy -Dr. H.L. Bansal
2. Magnetic cure for common diseases - Dr. R.S. Bansal, Dr. H.L. Bansal.
3. The text book magneto therapy - by Dr. Nanubhai Painter.
4. Magneto therapy and Acupuncture- Dr. A.K. Mehta
5. Electromagnetic treatment - Dr. H.L. Bansal

COMMUNITY HEALTH & MEDICINE

- Evolution of medicine
- Concept of community health
- General epidemiology
- Genetics
- Screening of disease
- Epidemiology of communicable disease
- Epidemiology of non-communicable disease
- Demography and health planning
- Preventive medicine
- Environment and health
- Basic medical statistics
- Health education and communication
- Health planning
- Health care of community

PRACTICALS

Theory

1 **Evolution of Medicine Ancient Medicine, Scientific, Medicine, Modern Medicine, Medical Evolution.**

2 **Concept of Community Health**

Concepts of Health, Health & Development, Indicators of Health Concepts of Disease, Concepts of Prevention, Disease Control and Eradication, Public Health, Social Medicine, Community Medicine ,Health Services, Planning and Management, Risk Approach, Evolution of Health Services.

3. **General Epidemiology-**

Introduction, Measurement of Mortality and Morbidity, Epidemiologic Methods Descriptive Studies Analytical Studies, Intervention Studies, Association and Causation ,uses of Epidemiology Infection Disease Epidemiology, Disease Transmission, Immunity, Immunizing Agents Disease Preventions and Control, Disinfection, Investigation of an Epidemic.

4 **Genetics**

5 **Screening of Diseases**-

Criteria for screening sensitivity and specificity.

6 **Epidemiology of Communicable Diseases**-

a. Respiratory infections- small pox, varicella, Measles, rubella, Mumps, influenza, Diphtheria, Pertussis, Tuberculosis.

b. Intestinal Infections- Polio, Viral hepatitis cholera, Acute Diarrheal Diseases, Typhoid Food Poisoning, Amebiasis, Ascariasis, Ancylostomiasis, Taeniasis.

c. Arthropod - Borne infections.

Yellow fever, Japanese Encephalitis, Malaria, Failaria.

d. Surface infections - Rabies, Trachoma, Tetanus, Leprosy, STD, AIDS.

7 **Epidemiology of non-communicable diseases**-

Cancer, Cardio- Vascular Diseases, Diabetes, Obesity, Blindness, Accidents, Hypertension Stroke, Rheumatic, Heart Disease.

8 **Demography and Family Planning-**

Demographic cycle, Population trends, Fertility related Statistic ,Health aspects of Family planning, contraceptive methods and delivery system, National Family Welfare Program.

9 **Preventive Medicine in Obstetrics, Pediatrics and Geriatrics**-

Antenatal, Intranatal, Postnatal Care, Low birth weight, Infant Feeding Growth and Development Growth Chart Under fives clinic, National Health Policy ,Indicators of MCH care, school health services ,Behavioral Problems, Geriatrics.

10. **Environment and Health and Occupational Health**- Purification of water and water quality standards ,Air Ventilation, lighting, noise, Radiation, Air, Temperature & Humidity, Housing, Solid Wastes Disposal and Control, Excreta Disposal, water carriage system, modern sewage Treatment ,Entomology Mosquito, Housefly ,Lice, Itch mite, Cyclopes, Rat Flea, Rodents, Insecticides- Hazards, Diseases Pre Placement Examination, Measures for General Health ,Protection of Workers, Prevention of Occupational Diseases, Legislation.

11 **Basic Medical Statistic** -

Censes, Vital Events, Legislation, SRS, Notification of Diseases, Measures of Dispersion and Centering, Sampling Tests of Significance, Correlation and Regression.

12 **Health Educations and communication** -

Objectives, Principles ,Aids, Practice and Health Education ,Planning and Evaluation.

13 **Health Planning** -Management International Health Organization, Planning Cycle, Management Methods and Techniques, National Health Policy, Health Planning in India, Five Year Plans, Health Systems in India- at Centre ,State and District Levels, Panchayat Raj,Rural Development Schemes.

14 **Health care of community** - Health systems and national health programs, Levels of Health care, Health for All Primary Health Care, Health care Delivery, Health Problems Health care services and systems, voluntary Agencies National Health Programs.

PRACTICALS

1. Insecticides - 10 + Models.
2. Universal Immunization Program - 10 + Models.
3. Communicable Diseases - 10 + Models.
4. Insect Borne Diseases - 10 + Models.
5. Microscope Slides - 10 + Models.
6. Environment and Sanitation - 10 + Models.
7. Statistical Charts
8. Field Visits
   a) Rural Health Centers.
   b) Sewage Disposal Plant.
   c) Water Filtration Plant.
   d) Nature Cure Hospital.
   e) Yoga Institutes etc

Text Books:-

1. Text book of preventive and Social Medicine- By J.E. Park and K. Park
2. Text book of preventive and social medicine - By B.K. Mahajan & M.C. Gupta

Reference Books :-

1. Preventive Medicine by Dr. Ghosh.
2. Preventive Medicine by Dr. Yashpal Bedi.

Reference Papers:-

- World Health Organization Programs papers.
- National Health Programs papers.
- Voluntary Health Programs Papers.
- Red Cross Programs Papers.
- UNICEF Programs papers.

BASIC PHARMACOLOGY AND PHARMACOGNOSY

- Introduction, Definition & scope of Pharmacology and Principles of general Pharmacology.
- Brief knowledge of drugs.
- Brief knowledge about WHOs “Essential Drug List”
- Brief knowledge of Cultivation, Conservation of Medicinal plants and information aboutendangered species.
- General Knowledge of Dravya for Naturopathic treatment.
- Knowledge of usages of Dravya.

PRACTICALS

A) PHARMACOLOGY THEORY

Introduction, Definition & scope of Pharmacology and Principles of general Pharmacology.

Brief Knowledge of following - Anaesthetics, CNS depressants, Sedatives, Hypnotics, Tranquilisers, Antipyretics, Analgesics, Antiepileptics, Antihypertensive, Antianginal,Antiplatelet, Hypolipidaemic, Haemopoetic, Coagulants, Bronchodialators, Aerosols/Inhalants, Expectorants, Digestants, Carminatives, Antacids, Antiulcer, Laxatives,Antidiarrhoeals, Antiemetic, Hepatoprotective, Diuretic, Antidiuretic, Lithotriptic,Antiinflammatory, Hormonal therapy, Antiobesity, Antidiabetic, Antithyroid, Oxytocic.Galactagogues, Contraceptives, Styptics, Antihistamins, Antimicrobial, Antibiotics,Antimalarial, Amoebicidal, Antifilarial, Anthelmentic, Antifungal,Vitamins, Minerals,Waterimbalance and IV fluids, Vaccines, antivenom, antirabbies serum, Local anti septics,drugs in ophthalmic practice, Anti cancer drugs and immunomodulators etc.

F. Brief knowledge about WHOs "Essential Drug List"

G. Brief knowledge of Cultivation, Conservation of Medicinal plants and information aboutendangered species.

(Note- all the drugs mentioned in the syllabus are strictly for understanding drug reaction and NOT to be prescriptive in nature ,students ,after graduation are not expected to prescribe any of the above- mentioned medication.

Textbooks -

a) Pharmacology and Pharmaco therapeutics –RS satoskar ,SD bhandarkar, SS ainapure
b) Essentials of medical pharmacology – KD tripathi
c) Pharmacology –rang and dale.

B) PHARMACOGNOSY

THEORY

1 Knowledge of Dravya for Naturopathic treatment.

2 General information of Dravya, its essence, characteristics, strength, effects and side effects and its usage.

3 Name of Dravya and alternative name, method of storage, impurities found in them and their purification.

4 General knowledge of internal and external method of usage of Dravya and their dosage.

5 Knowledge of usage of various Dravya being used in therapy:-

I. Haritki
II. Amalaki
III. Vibhitak.
IV. Guduchi.
V. Bilab.
VI. Jyotashimati.
VII. Madhuyasti.
VIII. Bakuchi.
IX. Ashoak.
X. Aargvadh.
XI. Lavangaila.
XII. Khadiryvani.
XIII. Shatpushpa.
XIV. Manjisth.
XV. Chandanraktpitshweat.
XVI. Bhramhi.
XVII. Shankhpushti.
XVIII. Ashwagandga.
XIX. Sarpagangha.

XX. Haridhra.
XXI. Rasot.
XXII. Tallish patra.
XXIII. Tulsi.
XXIV. Marich.
XXV. Pippali.
XXVI. Shunthi.
XXVII. Jatifal.
XXVIII. Arjun.
XXIX. Adrakh.
XXX. Gratkumari.
XXXI. Rason.
XXXII. Palandu.
XXXIII. Guggulu.
XXXIV. Chakramard.
XXXV. Maithika.
XXXVI. Kapur.
XXXVII. Ashwagandha
XXXVIII. Ajavayan
XXXIX. Badar
XL. Mirach
XLI. Rason
XLII. Shatawaree
XLIII. Musali
XLIV. Karpoor
XLV. Kumaree

Introduction, knowledge of guna-karma of following groups of Annapanavarga:-

- JalaVarga
- DugdhaVarga
- MadhuVarga
- IkshuVarga
- TailaVarga
- MadyaVarga
- MutraVarga
- SukadhanyaVarga
- SimbidhanyaVarga
- PhalaVarga
- ShakaVarga
- MamsaVarga
- LavanaVarga
- Kritannavarga (Processed food)

PRACTICAL

1 Introduction to substance, their storage, and practical method of their usage.

Content of Practical

1 Detailed knowledge of identification of following drugs: -

(i) Kanda (stem) - Guduchi

(ii) Patra (leaves) - Swarnapatri, Vasa ,Kumari

(iii) Pushpa (flower and Parts of flower)-Lavanga, Nagapuspa,Japa

(iv) Phala (fruit) - Pippali, Madanaphala,Vidanga

(v) Beeja (seeds) – Eranda,Kapikacchu, Vidanga

(vi) Twak (bark) –Kutaja,Arjuna,

(vii) Moola(Root)- Punarnava,Aswagandha

(viii) Niryasa (exudate) - Hingu, Guggulu,Mocharasa

(ix) Jangamadravya (animal origin) - Madhu,Ghrita

2 Collection of minimum 50 herbarium specimen from field visit.

3. Compilation of a drug not less than 25 pages

4 Concept based clinical study on single drugs (Minimum 5 from detailed and non-detailedlist of drugs) in patients.

REFERENCE:

1. Dravyagunhastamalak- VaidhBanwarilalmishr

2. Dravyagunvigyan- AcharyaPriyavat Sharma

3. Bhavaprakashkesandharbhitansh

SYLLABUS AND CURRICULUM FOR BACHELOR OF NATUROPATHY AND YOGIC SCIENCE

(III YEAR)

Duration 1 year

1. **MANIPULATIVE THERAPY**
2. **ACUPUNCTURE, ACUPRESSURE& REFLEXOLOGY**
3. **YOGA AND IT'S APPLICATION**
4. **NATUROPATHY DIAGNOSIS, CONVENTIONAL MEDICINE, FIRST AID & EMERGENCY**
5. **FORENSIC MEDICINE & TOXICOLOGY**
6. **FASTING THERAPY, NUTRITION & DIETETICS**

MANIPULATIVE THERAPEUTICS

- Introduction and History of Massage.
- Rules, Regulations and Characteristics of Masseur.
- Structures especially concerned in massage therapy.
- Effects of the pressure of hand and lubricants on the bodily system
- Getting crisis through massage
- Basic therapeutic of massage techniques.
- Massage and its effects:-
- Different Massage manipulations classification
- Movements of Joints
- Massaging in local areas under special circumstances
- Massage to women
- Massage to infants and children
- Massage for prevention of diseases and maintenance of natural beauty.
- Ayurvedic massage-terminology, methods and manipulations.
- Chiropractic
- Osteopathy
- Aromatherapy

PRACTICALS

THEORY

1. Introduction and History of Massage.
2. Rules, Regulations and Characteristics of Masseur.
3. Structures especially concerned in massage and parts of the body to be specially studied for the purpose are as follows:-
   a) Skin.
   b) Muscular System.
   c) Heart and Circulation.
   d) Nervous system.
   e) Skeletal system including joints.
4. Effects of the pressure of hand and lubricants on the following systems:-
   a) Skin.
   b) Muscular System.
   c) Skeletal system.
   d) Circulatory system.
   e) Respiratory system.
   f) Excretory system.
   h) Powder Massage-merits and demerits.
5. Getting crisis through massage (Side effects and benefits)
6. Basic therapeutic massage techniques indications and contraindications of massage while applying to the patients.
7. Massage and its effects:-
   a) Nutrition.
   b) Haematogenesis.
   c) Phagocytosis.
   d) Increase in the number of blood corpuscles.
   e) Absorption of increased inflammatory exudates, change in the weight of the person, obese or emaciated.
8. i)Different Massage manipulations classification and their detailed explanation used and contra-indications.

ii)Manipulative treatments in stress management.

iii)Shaistu in manipulative therapy (Acupressure)

iv)Manipulations and life extension.

v)Dry brush massage, Hot stone massage, Deep tissue Massage, Powder Massage

9. **Movements of Joints:-**

i. Flexion
ii. Extension
iii. Abduction
iv. Adduction
v. Supination &Pronation
vi. Circumduction
vii. Deviations -Medial and Lateral
viii. Opposition.

10. **Massaging in local areas under special circumstances** :-

a) Massage to abdomen
i) Massage to liver
ii) Massage to stomach
b) Massage to heart
c) Massage to heart
d) Massage to spine
e) Special types of Massage in different diseases

11. **Massage to women**

12. **Massage to infants and children**

13. Massage for prevention of diseases and maintenance of natural beauty.

14. **Ayurvedic massage**-terminology, methods and manipulations.

i. Medication of oils

ii.Abhyang mein snehano ka prayog

15. **Chiropractic:-**

Origin and aims of chiropractic
X-Ray Technique and Chiropractics

Importance of spine in Chiropractic
Physiological effects of chiropractic
Spinal Manipulative Therapy
Chiropractic Examination.
Chiropractic treatment in various Diseases.

16. **Osteopathy :-**

Definition and the Basic principles of osteopathy, Relation of osteopathy to Musculoskeletal system.

17. **Aromatherapy :-**

A. Definitions, Origin and History of Aroma therapy.

B. Essential Oils and its types, extraction of essential oils, distillation cold pressing or expression, solvent extraction, storage recognition selection and mechanism of essential oils.

C. Carrier oils-Almond, Apricot, and Avocado, Carrot corn, primrose, grape seed, hazelnut jojoba, olive peanut safflower, sesame, soybean and sunflower oil.

D. Different methods of using essential oils-inhalation diffusers, vaporizers, and massagebaths, compresses oral intake beauty treatment, room sprays insect repellents etc.

E. Description of different essentials oils and their benefits.

F. The best essential oils-The five fragrance categories-green floral citrus, woody and spicy and mixing of Aroma Oils and equipment required for mixing oils.

G. Aroma oils for common problems and their therapeutic properties.

H. Precautions, ill effects and careful handling of essential oils.

I. Contraindications-oils to be avoided in particular problems.

PRACTICIALS

1. 35 demonstration classes
2. 10 demonstrations in Panchakarma
3. Each student should do 35 massages

Text Books:-

1. Massage Books - By George Downing
2. Massage Therapy - By Dr. J.H. Kellog
3. The complete book of massage - By Clare Maxwell Hudson
4. Manual of osteopathy Practice - By Alan stoddard.
5. Massage (Ayurvedic) - By Achanta Laxmipathy.

Reference Books :-

1. The Panchakarma Treatment of Ayurveda-By T.L. Devraj.
2. Chirotherapy : A- Text of Joint Movements-By Hesse P.De.
3. Book of massage and aromatherapy (Achieving complete relaxation and well being with massage and essential oils.)
4. Brain Massage, Revitalize mind body - By Howell, Kelly
5. Aromatherapy -By Julie Sadler

ACUPUNCTURE, ACUPRESSURE & REFLEXOLOGY

- Definition, concepts of Acupuncture.
- Theories of Acupuncture.
- Materials and methods of acupuncture.
- Principle of Acupuncture.
- Rules for selection of Acupuncture points.
- Contraindications and complications of Acupuncture.
- The concept of Meridians
- The extra-ordinary points.
- Diagnostic methods (both acupuncture and modern)
- Auriculo Therapy, Scalp Needling
- Moxibation.
- Stimulation in Acupuncture.
- Acupuncture Therapeutics.
- Acupuncture Anesthesia.
- Reflexology and Zone Therapy
- Acupressure
- Acupuncture/acupressure in acute disorders and emergency.
- Pranic healing
- Reiki

PRACTICAL

Theory

1. Definition, concepts of Acupuncture.
2. Traditional and modern theories of Acupuncture.
3. Materials and methods of acupuncture.
4. Principle of Acupuncture.
5. Rules for selection of Acupuncture points.
6. Contraindications and complications of Acupuncture.
7. The concept of Meridians:-
    a) Lung Meridian (Lu)
    b) Large Intestine Meridian (LI)
    c) Spleen Meridian (SP)
    d) Stomach Meridian (ST)
    e) Heart Meridian (H)
    f) Small intestine Meridian (SI)
    g) Urinary Bladder Meridian (UB)
    h) Kidney Meridian (TW)
    i) Triple warmer Meridian (TW)
    j) Gall Bladder Meridian (GB)
    k) Liver Meridian (Liv)
    l) Governing Vessel Meridian (C.V.)
    m) Conceptional Vessel Meridian (C.V)
    n) Eight extra Meridian
8. The extra-ordinary points.
9 Diagnostic methods (both acupuncture and modern)
10. Auriculo Therapy, Scalp Needling
11. Moxibation.
12. Stimulation in Acupuncture.

13. Acupuncture Therapeutics.
14. Acupuncture Anesthesia.
15. Reflexology and Zone Therapy:-

    Reflexology, history and development.

    Body and its reflex zones.

    Application, indications and contra-indications

    Preventive effects of reflexology
16. Acupressure:-

    Introduction of Acupressure

    Its origin and development.

    Physiological effects of acupressure.

    Therapeutic uses of Acupressure.
17. Acupuncture/acupressure in acute disorders and emergency.
18. Pranic healing
19. Reiki

PRACTICAL

1. Demonstration of Needling techniques and Electro-stimulation, Moxibation.
2. Each student should give treatment to at least 20 patients during the practical.

Reference Books:-

1. Clinical Practice of Acupuncture - By A.L. Agarwal
2. Clinical Acupuncture - By Dr. Anton Jayasurya
3. Principles and practice of Acupuncture - By Dr. J.K. Patel
4. Health in your hands - By Devendra Vora
5. Shiatsu - By Ohashi

YOGA & IT'S APPLICATION

- Patanjali Yoga sutras
- Hatha Yoga Pradipika
- Introduction to other streams of Yoga-kundlini and Tantra Yoga.
- Yoga Nidra.
- Meditation- and its various
- Different relaxation techniques.
- Yoga in relation to personality and education.
- Yoga in relation to sports and games social and political life.
- Eye exercises.
- Physiological aspects of Asanas.
- Physiological neurophysiological aspects of pranayama.
- Shat Kriyas - Comparative study with other system of medicine.
- Physiological aspects of exercises.
- Physical exercises for health and fitness
- Swara Yoga.

PRACTICALS

Theory

1. Patanjali Yoga sutras-First two chapters. (i.e., samadhi pada & sadhana pada brief summary of vibhutipada and kaivalyapada)
2. Hatha Pradipika- full text with necessary reference to Gheranda samhita and siva samhita.
3. Introduction to other streams of Yoga-kundlini and Tantra Yoga.
4. Yoga Nidra Methods, application, effects and benefits.
5. Meditation-Types of Meditation Omkar, cyclic, Vipassana etc. Methods of application, benefits, precaution its influence on health and disease.
6. Different relaxation techniques.
   a) Instant relaxation,
   b) Quick relaxation
   c) Deep relaxation techniques - their methods effects and benefits.
7. Yoga in relation to personality and education.
8. Yoga in relation to sports and games social and political life.
9. Eye exercises-Benefits methods precautions.
10. Physiological aspects of Asanas.
11. Physiological neurophysiological aspects of pranayama.
12. Shat Kriyas-Comparative study of shat kriyas with other system of medicine.
13. Physiological aspects of exercises.
14. Physical exercises for health and fitness (a) Introduction (b) Who should stretch (c) when to stretch (d) stretch (e) stretch (f) Relaxing stretches for Back,legs, feet, ankles ,Hips, hamstring, low back (g) stretching exercises for elderly (h) Stretching exercises for abdominal muscles, Arms Chest, Ankles, Legs, knee, thigh, fore arm etc. (i) Techniques of walking running cycling etc. (j) Caring back.

15. Swara – Yoga.

PRACTICAL

I. Asanas

1. Including all asana of 1 year adding some advanced postures form Yoga deepika.
2. All loosening (Shitilikarana Vyayama) and breathing exercises.

II. Pranayama (as Ist B.N.Y.S.)

III. Kriyas - (Including Portion of Ist B.N.Y.S.)

1) Dhouti - Vastra
2) Gajakarnai - (Varisara Dhouti)
3) Nauli - (all three types)
4) Shankha Prakshalana- 1. Laghu. 2. Maha

IV. Meditaion-

1) Omkara
2) Cyclic
3) Vipassana

V. Techniques Like-

1) Self Management of Excessive Tension (SMET)
2) Pranic Energisation Techique (PET.)
3) Mind Sound Resonance Technique (MSRT)
4) Yoga Nidra (Short and long session)

Books Recommended:-

1. The Science of Yoga - By Tamini (Commentary on patanjali Yoga sutras)
2. Hatha Yoga Pradipika - By (Kaivalyadhama Publication -Lonavla).
3. Pranayams - By Vivekananda Kendra Publications.
4. Research papers - By Kaivalyadhama.
5. Vipassana- By S.Goenka

NATUROPATHY DIAGNOSIS, CONVENTIONAL MEDICINE, FIRST AID & EMERGENCY

FACIAL DIAGNOSIS

- Introduction to the science of facial expression.
- Characters of the Healthy Body-
- Foreign matter theory :-
- The nature origin and cure of diseases of children and their unity.
- Unhealthy habits leads to accumulation of foreign matter in the body
- Types of encumbrance
- Diseases of the internal organs and their treatment.
- Process of elimination of foreign matter
- Methods for improving the vitality of the body.
- Nabhi Pareeksha,

IRIS DIAGNOSIS

- Introduction of iridology :
-
- Comparison of fermentation and inflammation.
- Interpretation of iris manifestations.

- Case histories according to Iridology.
- Advance research in Iridology.

PRACTICALS

MODERN DIAGNOSIS AND FIRST AID

SECTION A - Clinical Diagnosis

- Examination of Patients
- Routine and special Investigations
- Bio chemical investigation.
- Final Diagnosis

SECTION B- FIRST AID

- General principles of First Aid.
- Wounds control of hemorrhage, Epitasis.
- Shock-Classification and treatment.
- Dog bite, snake bite, scorpion sting.
- Burns and Scalds.
- Heat exhaustion, heat stroke and fainting, frost bite.
- Fractures, dislocations, sprains and strains.
- Poisoning.
- Epileptic fits, convulsions in children.
- Aspiration of foreign body.
- Artificial respiration.
- Bandages of different types.
- Unconsciousness and general principles of treatment.

SECTION C- Recognition, Evaluation of Clinical Emergencies

- Cardio Vascular System :-
- Respiratory system-
- Gastro Intestinal System :-
- Central Nervous system:-
- Renal System
- Endocrine and Metabolism
- Miscellaneous Emergencies

PRACTICALS

Theory:-

FACIAL DIAGNOSIS

1. Introduction to the science of facial expression.
   a) Historical highlights.
   b) Definition and scope of the science of facial expression.

2. Characters of the Healthy Body-
   a) Normal Functions.
   b) Normal Figure.

3. Foreign matter theory :-
   a) Definition to foreign matter.
   b) The process of accumulation of foreign matter in the body.
   c) Encumbrance.
   d) Changes caused in the body due to the accumulation of foreign matter.
   e) General pathology of foreign matter.
4. The nature origin and cure of diseases of children and their unity.
5. Bad habits supports the accumulation of foreign matter in the body:- tobacco, alcoholic drinks, coffee tea, opium etc. Drug addictions- pethedine, heroin injection etc. suppression of diseases viz elimination of morbid and diseased germs from the system.
6. Types of encumbrance: - front encumbrance, back encumbrance, front and right side encumbrance left side encumbrance and mixed or whole encumbrance their description general characters and possible diseases in the concerned Encumbrance and their treatment.
7. Diseases of the internal organs and their treatment.
8. Process of elimination of foreign matter
   a) Importance of Nature cure treatments
   b) The digestive process natural dietetics
   c) Artificial outlets of elimination
9. Methods to be followed to increase the vitality of the body.
10. The importance of Nabhi Pareeksha, The Methods of Nabhi Pareeksha and the techniques of correction.

IRIS DIAGNOSIS :-

1 **Introduction of iridology :**

a) Definition of iridology.
b) Historical highlights.
c) Comparison of Diagnostic methods of various systems (Allopathy, Homeopathy Ayurveda Unani etc.)
d) Anatomy of the Iris.
e) Theory in application.
f) The theory of healing crisis.
g) A unit from division and classification of diseases.
h) Philosophical phase.
i) Theoretical phase.

2 **Instructions in Methods of Application**

a) Technique in Iris reading
b) The normal and abnormal Iris,color of the Iris.
c) The vibratory theory.
II Study of density of the Iris.
III Key to Iridology.
a) Iris chart brought up to date.
b) Zone areas.
c) Sectoral Division.

3 Comparison of fermentation viz inflammation.

4 **Interpretation of iris manifestations.**

a) Types of inflammation.
b) Inherent (Lesions and weakness).
c) Acidity and Catarrh.
d) Toxic settlements.
e) Nerve Rings.
f) The Lymphatic rosary.
g) Injuries and operations.
h) Itch or Psora sports in the iris - the surf rim.
i) The radii Solaris.
j) Tumors.
k) The sodium ring.
l) Anemia in the extremities and in the brain.
m) Drugs and chemicals appearance on the Iris and their poisonous effects in the body Arsenic, Bismuth, Bromides, Coal-tar products, Ergot, Glycerin, iodine, iron, lead, mercury, Opium Phosphorous, Quinine Salicylicacid,sodium,Strychnine,Sulfur,Turpentine,Vaccines etc.

II. The iris reveals the cause of disease.

5 **Case histories according to Iridology**.

6 **Advance research in Iridology.**

a) Reflex area and remote symptoms.
b) Stomach and intestinal disorders the principle causes the principle disorders and remedial Measures.

PRACTICALS

Clinical classes and Demonstrations in the Nature Cure Hospital Case studies 25 with record. Demonstration of Equipments.

Recommended Text Books –

1. Science of Facial Expression -By Louis Kuhne
2. The New Science of Healing -By Louis Kuhne
3. The Science and Practice of Iridology -By Bernard Jensen
4. Iridiagnosis and other Diagnostic Methods -By Henry Lindlahr

Reference Books –

1. Iridology : A guide to Iris Analysis and Preventive Health Care -By Adman J. Jackon
2. Iridology : How to Discover Your own pattern of health and well being Through the Eye -By Dorothy Hall
3. Iridology : A complete guide to Diagnosing Through the Iris and all related forms of treatment -By Davis and Farida
4. Iridology : Alternative Health Series -By Adam J. Jackson
5. Vision of Health : Understanding Iridology -By Jensen Bernad and Booden Donald
6. Eyes Talk : Through Iridology Better Health -By Vriend Joha.

MODERN DIAGNOSIS AND FIRST AID

THEROY

SECTION A- Clinical Diagnosis

1. **Examination of Patients** :-

1 Approach to a patient.
2 History taking and case sheet writing.
3 Symptomatology.
4 Examination of Vital Data.
5 Importance of height weight abdominal girth.
6 General Physical examination.
7 Examination of breasts back spine and genitals.
8 Systemic examination of the patient.
   a) Abdomen (Digestive System).
   b) Cardiovascular System.
   c) Respiratory system.
   d) Renal system.
   e) Central Nervous system.
   f) Locomotor system.
   g) Examination of ear, nose and throat.
   h) Gynecological examination.

9 Provisional Diagnosis

II **Routine and special Investigations** :-

1. Laboratory Investigation .
   a) Urine analysis.
   b) Stool examination.
   c) Blood examination.
      i) Peripheral smear, Total WBC Count, Differential WBC Count.
      ii) Erythrocyte sedimentation rate (E.S.R.) Hb Estimation.
      iii) Blood Sugar, Blood Urea, Serum Uric acid, serum cholesterol, serum lipid profile, serum Creatine.

2 **Radiological Investigation** :-

a) Plain Chest X- Ray.
b) K.U.B.
c) Lumber and Cervical Spine.
d) Skull and Paranasal Sinuses.
e) Joints.

3 **Contrast Radiography :-**

a) Cholecystography.
b) Pyelography.
c) Angiography.
d) Bronchogram.

4 Electrocardiography.
5 Echo-Cardiography.
6. Coronary angiography.
7. Electro-Encephalography.

8. **Bio chemical investigation**.

a) Liver Function tests.
b) Creatinine clearance test.
c) Vanillylmandelic acid (VMA) excretion test in urine.
d) SGOT and SGPT.
e) LDH.
f) CPK.

9. Diagnostic Paracentesis.
10. Coronary Thoracocentesis.
11. Lumber Puncture and CSF analysis.
12. Radio -active iodine up take studies.
13. Thyroid T3, T4 estimation.
14. Diagnostic skin tests.
15. Endoscopic procedures.
16. Ultra-sonography .
17. Computerizes tomographic scan (CT Scan).
18. Magnetic Resonance technique (MRI)
19. Positron Emission Tomography (PET)
20. Doppler Study

III. **Final Diagnosis**

Section B- FIRST AID

1. General principles of First Aid.
2. Wounds control of hemorrhage, Epitasis.
3. Shock-Classification and treatment.
4. Dog bite, snake bite, scorpion sting.
5. Burns and Scalds.
6. Heat exhaustion, heat stroke and fainting, frost bite.
7. Fractures, dislocations, sprains and strains.
8. Poisoning.
9. Epileptic fits, convulsions in children.
10. Aspiration of foreign body.
11. Artificial respiration.
12. Bandages of different types.
13. Unconsciousness and general principles of treatment.

Section C- Recognition, Evaluation of Clinical Emergencies

I. **Cardio Vascular System** :-
   1 Acute myocardial infarction.
   2 Cardiogenic Shock.
   3 Cardiac arrhythmias.
   4 Cardiac arrest.

II. **Respiratory system**-
   1 Hemoptysis.
   2 Status asthmatics.
   3 Spontaneous pneumothorax.
   4 Acute respiratory failure.

III. **Gastro Intestinal System** :-
   1 Acute vomiting.
   2 Perforations of Peptic Ulcer.
   3 Hemetemesis.
   4 Hepatic Precoma and coma.

IV. **Central Nervous system:-**

1 Unconscious patient.
2 Cerebrovascular Catastrophes.
3 Convulsions.
4 Status epilepticus.

V. **Renal System** :-

1 Acute renal failure.
2 Renal Colic.
3 Hematuria.

VI. **Endocrine and Metabolism** :-

1 Thyroid crisis.
2 Adrenal Crisis.
3 Diabetic Keto acidosis and coma.
4 Hypoglycemia.

VII. **Miscellaneous Emergencies** -

1 Syncope.
2 Acute peripheral circulatory failure.
3 Acute reaction.
4 Hypothermia.

PRACTICALS

1 History taking and physical examination of cases.

2 Case sheet writing in different general cases (25)

3 Demonstration of equipments and instruments used for investigation in modern diagnostics

4 Demonstration tour an ultra modern super -specialty Hospital to see the latest techniques of modern investigations.

RECOMMENDED TEXT BOOKS :-

1	Hutchinson's Clinical Methods	- By Chamberlin -
2	Clinical Methods	- By P.S. Shanker -
3	Clinical Diagnosis	- By P.J. Mehta
4	Oxford's hand book of Clinical Medicine	- By St. John Ambulance Association.
5	First Aid	- By L.C. Gupta and others

FORENSIC MEDICINE & TOXICOLOGY

1. FORENSIC MEDICINE:

- Definition of Forensic medicine and its scope.
- Procedure of giving medical evidence with reference to Indian evidence act.
- Methods of identification of living and dead body, race, age, sex etc.
- Death
- Medico legal autopsy.
- Medico-legal wounds
- Examination of blood stains, hairs and seminal stains.
- Miscellaneous causes of death including Physical agents
- Violent asphyxia deaths
- Sexual Offences
- Infanticide.
    - Forensic Psychiatry.
    - Police inquest, difficulties in detection of crime, legal procedure in Criminal
    - Courts and their powers
    - Rules of giving evidence, professional confidentiality.
    - Post mortem examinations.
    - Death from burns and scalds and lighting.
    - Law in relation to a medical man, medical ethics, duties.

B. TOXICOLOGY:

- General considerations of poisoning and classification.
- Actions of poisons, factors modifying their action.
- Diagnosis of poisoning.
- Treatment of poisoning in General.
- Poisons:
- Definition of food adulteration. Names of common adulterants and general
- methods of detection for food adulterants, Common food poisonings-
- Botulism, Chemical Poisoning, Poisonous Mushrooms and epidemic dropsy
- Responsibilities and duties of the medical practitioners to the state,
- Professional secrecy and privileged communication.
- Un-professional conduct and malpractice.
- The rights and privilege and duties of medical practitioners.
- The functions of state-medical council and its relationship to Indian Medical Council.

PRACTICALS

THEORY

1. **FORENSIC MEDICINE**:

1. Definition of Forensic medicine and its scope.
2. Procedure of giving medical evidence with reference to Indian evidence act.
3. Methods of identification of living and dead body, race, age, sex etc.
4. Death:- Types of death-Somatic/Clinical/Cellular, Molecular & Brain death including cortical and brainstem death, sudden death, Medico- legal importance, Sign of death, Post-mortem changes after death and calculating time of death.
5. Medico legal autopsy.
6. Medico-legal wounds, their classification and study and medico-legal aspects.
7. Examination of blood stains, hairs and seminal stains.
8. Miscellaneous causes of death including Physical agents- Heat, cold, electricity, Lightening, Radiation, Starvation etc.,
9. Violent asphyxia deaths:- Hanging, Strangulation, Suffocation and drowning.
10. Sexual Offences: - Impotency and sterility, Virginity, legitimacy, un-natural Offences, Medico-legal aspects, Anesthetic death.
11. Infanticide.
12. Forensic Psychiatry.
13. Police inquest, difficulties in detection of crime, legal procedure in Criminal courts and their powers, oath, medical evidence, medical certificate, Dying declaration.
14. Rules of giving evidence, professional confidentiality.
16. Post mortem examinations.
17. Death from burns and scalds and lighting.

18. Law in relation to a medical man, medical ethics, duties, professional privilege and responsibilities.

B. **TOXICOLOGY**:

1. General considerations of poisoning and classification.

a) Actions of poisons, factors modifying their action.

b) Diagnosis of poisoning.

c) Treatment of poisoning in General.

2. Poisons:

a) Corrosives b) Nonmetallic poisons

c) Insecticides and weed killers d) Metallic poisons

e) Organic Irritant poisons f) Somniferous poisons

g) Inebriant poisons h) Delibriant poisons

i) Drug Dependence j) Food poisoning

k) Spinal poisons m) Asphyxiants

3. Definition of food adulteration. Names of common adulterants and general methods of detection for food adulterants, Common food poisonings - Botulism, Chemical Poisoning, Poisonous Mushrooms and epidemic dropsy

4. Responsibilities and duties of the medical practitioners to the state, Professional secrecy and privileged communication.

5. Un-professional conduct and malpractice.

6. The rights and privilege and duties of medical practitioners.1) Cardiac poisons n) Miscellaneous

7. The functions of state-medical council and its relationship to Indian Medical Council.

PRACTICALS

1. Age estimation.

2. Autopsies

3. Examination & drawing opinion from examination of Skeleton remains.

4. Identification & drawing medico-legal inference from examination of injuriescontusion,abrasion, laceration, firearm wound, burns, head injury, bone fracture.

5. Identification ABO & RH blood groups of a person

6. Identification & drawing of medico-legal inference from common poisons.

TEXT BOOKS:

1. **Dr. K.S.N.Reddy-**

   The essential of Forensic Medicine & Toxicology 21st Edition 2002. Published by- K.Saguna Devi- Edited by BV Subramanyam,Butterworths India, New Delhi.22nd edition, 2001.

2. **Dr. C.K.Parikh**-

   A text book of Medical Jurisprundence, Forensic Medicine & Toxicology, CBSPublishers, Delhi, Sixth Edition 1999.

3. **Dr. Apurba Nandy**-

   Principles of Forensic Medicine, 3rd Edition 2000, New Central Book Agency(P) ltd. Calcutta.

4. **Dr. Krishan Vij-**

   Text book of Forensic Medicine & Toxicology-Principles and Practice, New Delhi, 2nd edition, 2002.

REFERENCE BOOKS:

1. The essential of forensic medicine - By Dr. C.J. Polson,D.J. Gee and B. Knight

2. Forensic Medicine - By Corden and Shapiro

3. Principles and practice of Medical jurisprudence - By Taylor's

4. Legal Boundaries of Nature Cure- By Advocate (Dr.) Ashok Kumar Sharma

FASTING THERAPY, NUTRITION & DIETETICS

FASTING THERAPY

- Introduction :-
- Theory of Animals
- History of Fasting
- Science of Fasting
- The Philosophy of Fasting
- Physiology of Fasting
- Facts explained about Fasting
- Practice of fasting
- Rules and regulations of Sane fasting and Therapeutic Fasting.
- Definition and classification of fasting.
- Hygienic Auxiliaries of Fasting-
- Study of Patient during and after fast.
- Indications and contraindications of fasting
- Therapeutic aspects of fasting
- Results of Fasting

PRACTICALS

NUTRITION

- Introduction of Nutrition :-
- Food Groups :-
- Nutritive Values of Food Ingredients Commonly used in India.
- The Science and fine art of food and Nutrition.
- Food as Medicine Know Facts
- Food and Toxins
- Nutritional Diagnosis.
- Public Health and Nutrition -
- Nutrition in Health

DIETETICS

- Concept of Health in Naturopathy.
- Dietetic Principles in Naturopathy.
- Concept of Wholesome diet.
- Medicinal values of Foods.
- Natural qualities of foods in Naturopathy/Ayurveda/ Modern Nutrition.
- Natural Food and Health -
- Diet for Physical Labor and Mental work.
- Hygienic Food and Hygienic Cookery.
- Naturopathic Hospital dietetics and their classification.
- Disease Management with diet
- Food allergy and dietary management.
- Diet for weight Reduction and Weight Gaining.
- Dietary modification for specific condition.
- Dietary reaction for a different population groups with special reference to pregnancy, lactation, Infancy.
- Seasonal changes into the dietary pattern
- Food Sanitation hygiene and health.
- Naturopathic approach towards vegetarian and non-vegetarian food.
- Harmful effects of the food colors, preservatives pesticides artificial manures.
- Dietary fiber and its therapeutic effects

- Geriatric nutrition and diet.
- Diet in exercise, sports games and athletics.
- Pediatric Nutrition.
- Nutrition and life span
- Diet, Fasting and Disease.
- Question of Quality and Quantity of Food.
- Customs and manners of eating Different views effect of emotional state on food utilization.
- Kalpa therapy in Naturopathy Grapes, Mango, Matha, Milk etc.
- Ideal Diet China study and Genuine Health Care.
- Food, Eating Self Healing Recovery of Vigor.
- Drugs Increase Nutritional Requirements.
- Toxic less Diet, Body Purification and Healing System.
- Vitamines.
- Physio-Pharmacology of Foods.

PRACTICALS

THEORY

I. Introduction :-

1. **Theory of Animals**
   a) fasting in Animals
   b) Health benefits of Fasting
   c) Your Tongue Never Lies
2. **History of Fasting**
   a) History of Fasting in India
   b) History of Fasting in Foreign Countries

3. **Science of Fasting**

II. The Philosophy of Fasting

1. The Philosophy of Sane Fasting
2. Philosophy of Therapeutic Fasting
   A) Life & its existence in connection with health and diseases
   B) Nature of disease
   C) The No - Breakfast Plan
   D) Objections commonly raised in Fasting Therapy
   E) Pros and cons of Fasting
   F) Difference between Fasting and Starvation
   G) Difference between Hunger and Appetite

III. Physiology of Fasting

1. General Physiology
2. Source and Metabolism of Carbohydrates, Fats and Proteins during fasting & Starvation.
3. Chemical and organic changes during Fasting.
4. Repair of Organs and Tissues during Fasting.
5. Changes in the fundamental functions while fasting.
6. The Mind and special senses during a fast.
7. Secretions and excretions.
8. Bowel action during a fast.
9. The influence of fasting on growth and regeneration.

10. Gain and loss of weight during fasting.
12. Autolysis.
13. Fasting and sex.
14. Rejuvenate essence Through Fasting.
15. Concept of Agni :-Agani vichar ,sam, visham, mand, tikshana agani isske karan avam nivaran

1V. **Facts explained about Fasting:-**

1) Fasting does not induce Deficiency Disease
2) Death in the fast.
3) Objections to the fast.
4) The quantity of Food Necessary to sustain life.

V. **Practice of fasting:-**

1) Fasting and disease cure
2) The Rationale of Fasting
3) The length of the fast
4) Contraindications of fasting.
5) Fasting in special periods and conditions of life.
6) Symptomatology of the fast.
7) Progress and Hygiene of the fast.
8) Breaking the fast.
9) Gaining weight after The Fast.
10) Living after the Fast.

VI. **Rules and regulations of SANE fasting and Therapeutic Fasting.**

VII. **Definition and classification of fasting**.

1) Definition of fasting in different aspects.
2) General classification of fasting (Religious, Political and Therapeutic)
3) Methods and types of therapeutic fasting (Dry, whey juice salad, Monodiet (Kalpa) Fruits, intermittent, preventive, weekly etc.)

VIII. **Hygienic Auxiliaries of Fasting-**

1) Air and Breathing.

2) Enema.
3) Bathing.
4) Clothing.
5) Water Drinking.
6) Exercise.
7) Mental Influence.

IX. **Study of Patient during and after fast.**

1) Crises during fasting and their management.
2) Physiological effects of fasting.
3) Biochemical aspects.
4) Study of the tongue the breath the temperature and pulse etc.
5) The loss and the gain of weight.
6) Process of breaking the fast.
7) Diet after the fast.

X. **Indications and contraindications of fasting**

XI. **Therapeutic aspects of fasting**

1) Fasting in acute diseases.
2) Fasting in chronic diseases.
3) Role of fasting in various diseases.
4) Obesity and fasting.
   a. Definition and assessment of obesity.
   b. Epidemiology.
   c. Clinical Features.
   d. Treatment.

XII. **Results of Fasting**

Practical

Study of 50 fasting cases
Case study of 25 with record

Text Books –

1. Fasting for Healthy and long life -By Hereward Carrington
2. The fasting cure and vital economy -By Lakshamana Sharma
3. Fasting can save your life -By Herbert M. Shelton
4. Fasting as a way of life -By Allan coll M.D.
5. Scientific Fasting -By Hazzard, Linda Burfield

Reference Text Books –

1. The Philosophy of Fasting -By Edward Eaul Purintion
2. Vitality Fasting and Nutrition -By Hereward Carrington
3. The Fasting cure -By Upton Sinclair
4. Rational Fasting -By Prof. Aronld Ehret
5. Miracles of Fasting -By Dr. Paava Airola

NUTRITION AND DIETETICS

NUTRITION

THEORY

I. **Introduction of Nutrition :-**

1 History of Nutrition.
2 Progress in Food Science.
3 Basic Principles of Nutrition.
4 Food Nutrition and Health.
5 Nutritional basis of life and life in connection with food.
6 Composition of Body in Relation to Nutrition.

II. **A Food Groups :-**

1 Cereals.
2 Millets and coarse grains.
3 Pulses.
4 Green leafy Vegetables.
5 Other Vegetables.
6 Roots and Tubers.
7 Fruits.
8 Milk and Milk Products.
9 Sugar and Jaggery.
10 Honey.
11 Nuts and Oil seeds.
12 Spices and Condiments.

B. Nutritive Values of Food Ingredients Commonly used in India.

III. **The Science and fine art of food and Nutrition.**

1 Philosophy of Nutrition.
2 Law of the Minimum.
3 Organic Vs Inorganic Foods.
4 Fruitarianism and vegetarianism.
5 Nature's Food Refinery.
6 The Digestibility of Foods.

7 Mental Influences in Nutrition.
8 Absorption of Food.
9 The way of eating
10 Correct food combining -Food Combining charts.
11 Effects of cooking.
12 Uncooked Foods (Raw Eating).
13 Salads.
14 Conservative Cooking.
15 Under Nutrition.
16 Hypo- Alkalinity.
17 Diet Reform Vs Supplemental Feeding.
18 Beginning the reform Diet.
19 Building the teeth.
20 The Eliminating Diet.
21 Feeding in Disease.
22 The Three Year Nursing Period.
23 Cow's Milk.
24 Pasteurization.
25 Mother's Milk.
26 No starch for Infants.
27 Feeding of Infants.
28 Our Denatured Soil.
29 Poshan Vishayak Rastriya karyakram
30 Aahar vidhi viseshatayan
31 Aahar parinamkarbhav
32 Dwadash aasan previcharna
33 Pathya apathy aahar
34 Viruddhahar
35 Ahar vidhi vidhan
36 Garbhini Aahar Vihar

IV. **Food as Medicine Know Facts**

1 Proteins are body builders.
2 Proteins are body Killers.
3 Poisoning through food
4 Vegetables as Do- It Yourself Therapy.

5 Ways of taking Solid Foods.
6 Vitamins and supplements for all ages.
7 The Vitamins Proof of natural food instincts.
8 Facts about common foods.

V. **Food and Toxins**

1 Infective agents and Toxins in food.
2 Food Adulteration and Consumer Protection.
3 Food additives.
4 Health Hazards of added chemicals in foods.
5 Nutrition and infection.
6 Study about adverse effect of Alcohol and Tobacco.

VI **Nutritional Diagnosis.**

VII. **Public Health and Nutrition -**

1 Education in Nutrition.
2 Nutritional Program.
3 Nutrition Survey and Methodology.
4 Nutritional assessments social aspects of the Nutrition
5 Fortification and Enrichment.
6 Exercise and Balanced Diet.
7 Nutrition in relation to disaster management.

VIII. **Nutrition in Health**

1 Human Nutritional requirements.
2 Nutrition in Pregnancy, Lactation, Infancy, Childhood, Adolescence and Old age.
3 Nutrition and Immunity.

IX. Nutritional deficiency diseases, Preventive and curative approach.

X. The optimum Nutrition Program for correcting Disease and Restoring, Building and Maintaining Health.

DIETETICS

Theory

1. Concept of Health in Naturopathy.
2. Dietetic Principles in Naturopathy.
3. Concept of Wholesome diet.
4 Medicinal values of Foods.
5. Natural qualities/Properties /Character foods in Naturopathy/Ayurveda/ Modern Nutrition.
6. Natural Food and Health -
   a) Importance of Green Vegetables other vegetables fruits and the ingredients.
   b) Chemical Composition of different raw juices their effects and uses –Ginger, Radish, Bottle gourd, Wheat Grass, Beetroot,Cabbage, Carrot, Cucumber, Lettuce ,Garlic Onion, Lemon, Papaya, Knol-Kol, pineapple, Mango, Tomato, Pomegranate, Grapes, Apple,Bitter gourd, Ashgourd, Bael Fruit, Spinach, Pumpkins, Watermelon, Indian Gooseberry, Orange, Sweet Lime, Whey Water and Neera etc.
   c) Sprouts their Nutritive Values and Methods of Sprouting.
   d) Food Value in Raw States, Germinated From and Cooked from.
   e) Comparison with raw and cooked foods.

7. Diet for Physical Labor and Mental work.
8. Hygienic Food and Hygienic Cookery.

9 Naturopathic Hospital dietetics and their classification.

10 Disease Management with diet:-Diabetes, Renal diseases, Anemia, PEM, Peptic Ulcer, Constipation, Malabsorption Syndrome, Liver Diseases like Jaundice, Fatty liver etc. HBP, LBP, Atherosclerosis, Gall Bladder Disease, Cancer and arthritis.

11 Food allergy and dietary management.

12 Diet for weight Reduction and Weight Gaining.

13 Dietary modification for specific condition.

14 Dietary reaction for a different population groups with special reference to pregnancy, lactation, Infancy.

15 Seasonal changes into the dietary pattern in:- Ayurveda/Naturopathy and Modern nutrition.

16 Food Sanitation hygiene and health.

17 Naturopathic approach towards vegetarian and non-vegetarian food.

18 Harmful effects of the food colors, preservatives pesticides artificial manures.

19 Dietary fiber and its therapeutic effects (e.g. constipation and rectal disorders colonic disorders GIT disorders D.M. etc.)

20 Geriatric nutrition and diet.

21 Diet in exercise, sports games and athletics.

22 Pediatric Nutrition.

23 Nutrition and life span: prolong life and Postpone Death.

24 Diet, Fasting and Disease.

25 Quality and Quantity of Food.

26 Customs and manners of eating Different views effect of emotional state on food utilization.

27 Kalpa therapy in Naturopathy Grapes, Mango, Matha, Milk etc.

28 Drugs Increase Nutritional Requirements.

29 Toxic less Diet, Body Purification and Healing System.

30 Vitamin -C Natural Anti-oxidants.

31 Physio-Pharmacology of Foods.
A) Anti- Bacterial Foods

B) Anti- Coagulant Foods.
C) Anti-Depressant Foods.
D) Anti-Diarrheal Foods.
E) Anti Diabetic Foods.
F) Anti Inflammatory Foods.
G) Anti-Oxidant Foods.
H) Anti-Viral Foods.
I) Anti- Hypertensive Foods.
J) Calming and sedative foods.
K) Anti-Cancerous Foods.
L) Eliminative Foods
M) Diuretic Foods
N) Immunity Enhancing Foods.
O) Life Prolonging Foods.
P) Memory Enhancing Foods
Q) Anti-Pyretic Foods.
R) Expectorant Foods.
S) Oestrogenic Foods.
T) Analgesic Foods.
U) Aphrodisiac Foods.

PRACTICALS

1 Visits to the dietetic department of the hospital.
2 Menu planning using natural foods and raw foods in general patients.
3 Demonstration of sprouts.
4 Preparation of low cost balanced diet for different population group using natural foods.
5 Modification of normal diet in consistency -liquid full soft.
6 Canteen duties at nature cure hospital.
7 Knowledge of Satvic food preparation at nature cure hospital.
8 Visit to different nutrition centers like NIN- Hyderabad, CFTRI. (Mysore)

Recommended Text Books-

1 Davidson and Passamore Human Nutrition and dietetics -By Passmore, Eastward.
2 Clinical Dietetics and Nutrition -By F.P. Anita

3 Normal and Therapeutics Nutrition –By Corinne H Robison Marilyn R. Lawler.
4 Essentials of food and Nutrition –By Swaminathan
5 Text book of Nutrition and Dietetics - By Sri Lakshmi.

Reference Book-

1 Food and Nutrition -By Gupta
2 Modern Nutrition in Health and Disease-By Shills
3 All Publications on Nutrition- - By National Institute of Nutrition, Hyderabad.

4 Indian Journal of Nutrition and Dietetics

5 The Sprouting Book -By Ann Wigmore

SYLLABUS AND CURRICULUM

FOR

BACHELOR OF NATUROPATHY AND YOGIC SCIENCE

(IV YEAR)

Duration - 1 Year

1 **PHYSICAL MEDICINE & REHABILITATION**

2 **HYDROTHERAPY AND MUD THERAPY**

3 **OBSTETRICS AND GYNECOLOGY**

4 **YOGA THERAPY**

5 **HOSPITAL MANAGEMENT, RESEARCH METHODOLOGY & MEDICAL STATISTICS**

6 **CLINICAL NATUROPATHY**

PHYSICAL MEDICINE & REHABILITATION

Theory

Exercise Therapy

- Basic Physics in Exercise Therapy.
- Introduction to exercise therapy.
- Starting positions
- Classification of movements
- Active movements
- Passive movements
- Muscle strength
- Joint movement
- Relaxation
- Posture
- Coordination exercise
- Gait
- Crutch gait
- Neuromuscular facilitation techniques
- Suspension therapy
- Myofascial realease therapy
- Therapeutic applications

Electrotherapy

- Electrical fundamentals
- Electrical energy
- Ohm's law
- Joule's law
- Magnetic energy
- Electromagnetic induction.
- Semiconductor
- Valves
- Principles of working in a capacitor
- Transistors
- Measurement of current intensity
- EMS and power
- Moving coil millimeter and voltmeter
- Low frequency currents
- Preparation- for electrotherapy
- Patient treatment technique
- Faradic and Galvanic currents
- High frequency current treatments
- Principles of radiation therapy
- Wax therapy

PRACTICALS

Exercise Therapy

1. Basic Physics in Exercise Therapy.
   a. Mechanics: Force, gravity, line of gravity, center of gravity in human body, base, equilibrium, axes and planes.
   b. Mechanical Principles: Lever, order of lever, examples in human body, pendulum, spring
2. Introduction to exercise therapy.
3. Starting positions: Fundamental starting positions, derived positions, muscle work for all the fundamental starting positions.
4. Classification of movements in details.
   a. Voluntary movements
   b. Involuntary movements
5. Active movements
6. Passive movements
7. Muscle strength: Anatomy and physiology of muscle tissue, causes of muscle weakness/paralysis, types of muscle work and contractions, range of muscle work, muscle assessment, Principles of muscle strengthening / reeducation, early reeducation of paralyzed muscles.
8. Joint movement: Classification of joint movements causes for restriction of joint movement, prevention of restriction of joint, range of movement, principles of mobilization of joint in increasing the range of motion, Technique of mobilization of stiff joint.
9. Relaxation: Technique of relaxation, Principles of obtaining relaxation in various positions.
10. Posture: Types, factors responsible for good posture, factors for poor development of posture.
11. Coordination exercise: Definition of coordinated movements, in-coordinated movements, Principles of coordinated movements, technique of coordination exercise.
12. Gait: Analysis of normal gait with muscle work, various pathological gaits.

13. Crutch gait: Introduction, Crutch measurement, various types of crutch gait in detail.
14. Neuromuscular facilitation techniques, functional reeducation.
15. Suspension therapy: principles of suspension, types of suspension therapy, effects and uses of suspension therapy with their application either to mobilize a joint to increase joint range of motion or increase muscle power, explaining the full details of the components used for suspension therapy.
16. Myofascial realease therapy and related therapies used in sports medicine
17. Therapeutic applications

Electrotherapy

1. **Electrical fundamentals**

    a. Physical principle
    b. Structure and properties of matter
    c. Molecular atom ,proton,neurtron,election,ion etc

1. Electrical energy

    a. Nature of electricity current
    b. Static electricity
    c. Electric potentials generated by cell

2. Ohm's law
3. Joule's law
4. Magnetic energy

    a. Nature and property of a magnet
    b. Magnetic induction
    c. Shaw rule
    d. Maxwell's corkscrew rule

5. Electromagnetic induction.

a. Principle and working of choke
b. Coil
c. Transformer
d. Rectification of AC to DC
e. Metal oxide rectifier

6. Semiconductor

a. Diode and triode

7. Valves

8. Principles of working in a capacitor

a. Details of charging and discharging

9. Transistors
10. Measurement of current intensity
11. EMS and power
12. Moving coil millimeter and voltmeter

13. Low frequency currents

a. Nature and principle of production of muscle stimulating currents
b. Types of low frequency current used for treatment
c. Therapeutic electric stimulation
d. Ionotophoresis
e. Phonophoresis

14. Preparation- for electrotherapy

a. Preparation of apparatus

15. Patient treatment technique

a. Stimulating muscles of extremity, back and face through the motor points

16. Faradic and Galvanic currents

17. High frequency current treatments

a. Physics of high frequency currents
b. Principles
c. Biophysics of heat physiology and cold.
d. Production, physiological and therapeutic effects and uses.
e. Technique of treatment, dangers and precautions, contraindication of ultrasonic therapy

18. Principles of radiation therapy

a. Physics of radiation therapy
b. Laws governing radiation: Production, physiological and therapeutic effects, uses, techniques of treatment, dangers and precaution, contraindication of IRR therapy, UV therapy.
c. Basic principles of TENS and IFT
d. Laser therapy

19. Wax therapy

a. Physics of Wax therapy
b. Physiological and therapeutic effect and uses.
c. Techniques of application.

PRACTICAL (I)

1). Interrupted/modified D.C.

a) Stimulation of Muscles directly.

b) Diagnostic tests
   (i) F.G. Test.
   (ii) S.d. Curve
   (iii) Fatigue Test.

2). Uses of surged faradism and interrupted galvatism in various peripheral nerve lesions.
   a) Neuroproxia.
   b) Axonotomosis
   c) Neurotomosis

PRACTICAL (II)

(High frequency current treatment)

a) Shortwave diathermy-setting up of apparatus including selection of method and electricity, Techniques, preparation of patient, checking, contra indications, application of SWD for various conditions and various parts of the body. Those must be practiced by the students.
b) Microwave diathermy-setting up of apparatus including selection of method and electricity, Techniques, preparation of patient, checking, contra indications, application of MWD for various condition and various parts of the body. Those must be practiced by the students.
c) Ultraviolet radiation: setting up of apparatus including selection of lamps technique of application of UVR for various conditions like test does, general body baths, acne vulgaris, alopecia areata and total is, ulcers, psoriasis, rickets and general debility patients.
d) Ultraviolet: setting up of apparatus sections of does, technique of application in various condition and to various parts of the body.

PRACTICAL (III)

1) Demonstration and practice of Active and passive movements.
2) Demonstration and practice of putting suspension to shoulder joint, Elbow joint in upper limb, hip joint and knee joint in lower limbs for all movements. Demonstration of total suspension.
3) Muscle strength: Demonstration and practice of strengthening, re-education of weak/paralyzed muscles of both upper and lower extremity, individual group muscles, abdominal muscle exercises.
4) Joint movements : Demonstration and practice of techniques to improve joint range of motion of hip joint, knee joint, ankle and foot in lower limb, shoulder joint, elbow joint, radio-ulnar joint, wrist joint & upper limb.
5) Demonstration and practice of free exercise to improve joint range of motion (small joints, eg. hand finger. toes etc.) Demonstration and practice of all crawling exercise, faulty posture, correcting techniques.

6) Demonstration of various pathological gaits.
Measurement of crutches, walking aids, strengthening of crutch muscles, crutch balance, Demonstration and practice of all crutch gaits.

7) Breathing Exercises: Demonstration and practice of Diaphragmatic breathing, localized expansion exercises.

8) Passive stretching: Techniques of passive stretching to sternomastoid muscle, shoulder abductors. Flexors elbow flexors and supinator, wrist and finger flexors in upper limbs passive, stretching to hip flexors, adductors, ilio-tibialband, tensor fascia lata, quadriceps, knee flexors, tendoachilies etc.

Book Reference (Both Theory and practical's)

1) Principles of Exercise Therapy - By Dena Gardiner.
2) Tidy's physiotherapy.
3) Cash text book of physiotherapy.
4) Clayton's Electrotherapy and actinotherapy.
5) Kisner's Therapeutic Exercise foundation and techniques.

HYDROTHERAPY

PAPER -1

- Introduction and History
- Physical properties and chemical composition of water
- Physiological basis of Hydrotherapy
- Production of heat and its distribution in the body
- Importance of water to human body.
- Physiological effects of on different systems of the body.
- Reflect areas of the body
- Action and reaction phase
- Place of water in preservation
- Place of water in Acute diseases
- Place of water in Chronic disease
- Magnesium Sulfate - use in Hydrotherapy

PAPER – II

- General Principle of Hydrotherapy
- Therapeutic actions and use of Hydrotherapy
- The techniques of Hydrotherapy
- Various baths and air baths
- Pool Therapy
- Douches:
- Fomentation and Stupes
- Compresses and Packs
- Internal use of Water
- Hydriatic Prescription Making:
- Mud Therapy:

PRACTICALS

THEORY

Paper 1

1. Introduction and History
2. Physical properties and chemical composition of water
3. Physiological basis of Hydrotherapy :- The skin and its anatomical construction, functions of the body
4. Production of heat and its distribution in the body, regulation of the body temperature, conditions that increase and decrease heat production in the body, body heat and body temperature.
5. Importance of water to human body.
6. Physiological effects of on different systems of the body.
   i) General and Physiological effects of heat upon:-
      a. Skin
      b. Respiration
      c. Circulation System
      e. Nervous System
      f. Heat and its production, dissipation etc.
      g. Tactile and temperature sense

   ii) General and physiological effects of cold upon skin respiration, Circulation System, Nervous System, G.I.T. Body Temperature and its Maintenance.
7. Reflect areas of the body, results of the application of hot and cold over reflex areas.
8. Action and reaction, incomplete reaction, Conditions that encourage and discourage reaction, internal reaction, thermal reaction, modified thermal reaction
9. Place of water in preservation
10. Place of water in Acute diseases
11. Place of water in Chronic disease
12. Magnesium Sulfate - use in Hydrotherapy

PAPER - II

1. **General Principle of Hydrotherapy**
   a) General rules of hydrotherapy
   b) Therapeutic Significance of Reaction
   c) Adaptation of individual cases
   d) Exaggeration of Symptoms under Treatment, the untoward effects and prevention.
   e) General indications and contraindications

2. **Therapeutic actions and use of Hydrotherapy:**
   a) Classification of Hydriatic effects, General Principles and Depression

   b) Primary Excitant effects when to apply and when not to apply
      1. Local haemostatic effects
      2. Cardiac effects, Hydratic and Heart tonics
      3. Uterine excitations, emanogogic effects
      4. Vesicle excitations
      5. Intestinal excitations, peristaltic effects

   c) Secondary excitant effects:-
      1. Restorative effects.
      2. Tonic effects of cold water, physiological effects of cold water, cold water Vs. Medical tonics, application diseases.
      3. Anemia, Neurasthenia Hypochondria cerebral congestion, Rheumatism, Diabetes mellitus, Valvular heart diseases.
      4. Calorific effects
      5. Diaphoretic effects.

      Importance of attention to the skin in chronic diseases alternative &qualitative effect - Hot baths in blights diseases, Sweating baths in dropsy and obesity, depurative or eliminative effects, Toxemia in Rheumatism.

      6. Expectorant effects.
      7. Diuretic affects - Brights diseases, Uremia- eclampsia.

8. Atonics Dyspepsia, Hyperacidity

9. Revulsive and derivative effects, revulsive methods forcombating superficial anemia and for relief of deep congestion, methods adopted to anemia of deep seated organs revulsion on analgesic measure.

   d) Resolvent effects, sedative effects -general sedative - local sedatives.

   i) Sedatives of the circulatory system- antiphogestic effects, inflammation, pneumonia, pleurisy and other acute disorders.

   ii) Nerve Sedatives, hypnotic, calmative analgesic, analgesic, anesthetic, antispasmodic on insomnia, chorea, spastic paralysis, exophthalmic goiter, mania, epilepsy and various painful conditions.

   iii) Anti- thermal and antipyretic effects, relation of heat production and heat elimination to antipyretic methods, principles that govern the application of hydratic measures for the reduction of temperature in fevers, methods that may be efficiently employed in various morbid conditions and effects, indications and contra - indications.

   iv) Secretary and sedative effects - prophylactic uses.

   a. Cold bathing in infancy and early childhood.
   b. The cold bathing for Adults.
   c. The cold Baths for Women.
   d. The cold bath in old age - precautions.

3. **The techniques of Hydrotherapy** :-

Plain water bath,Cold hip bath, Kellogg's & Kuhn's sitz bath, Shallow bath, for males, females, hand and arm Graduated bath & foot bath, hot and Cold Natural bath, alternative leg bath, Non revulsive bath,Immersion bath, Cold plunge bath, Whirl pool bath Aeration bath, Vichy spray massage, Rapid bath, Brand - bath, Fever bathing, sea bathing.

4. **Various baths and air baths-** Russian bath, Turkish bath, Steam inhalation, Hot air bath, Local hot air bath, Super hot air bath, Cold air bath, Local hot air bath, Super hot air bath, Cold air bath, Indoor and out-door baths.

5. **Pool Therapy:**

(a) Introduction
(b) Principles of treatment Part-I and Part-II
(c) Physiological and Therapeutic effect of exercise in warm water.
(d) Indications and contra-indications
(e) Dangers and precautions

6. **Douches**:

Cold Douche
Hot Douche
Neutral Douche
Alternative Douche
Under Water Douche
Contrast Douche
Horizontal Jet
Cephalic Douche
Lumbar Douche
Fan Douche
Rain Douche or Shower Douche
Hepatic Douche
Circular Douche and Semi Circular Douche
Cerebrospinal Douche
Plantar Douche
Percussion Douche
Scotch Douche
Revulsive Douche
Ascending Douche
Caliper Douche
Filiform Douche

Fog Douche
Massage Douche
Shoulder Douche
Thoracic Douche
Abdominal Douche
Anal Douche
Perineal Douche
Pulmonary Douche
Cardiac Douche
Gastric Douche
Enteric Douche
Renal Douche
Articular Douche
Vapour Douche

7. **Fomentation and Stupes:**
The hot water bag, the siphon hot water bag, the thermo pore, the mustard Fomentation, clay and glycerin poultice, charcoal poultice, cotton poultice.

8. **Compresses and Packs**:
The wet sheet pack, cooling pack, cold shower pack, sweating pack, very cold compress, proximal compress, neutral compress, alternate compress, repulsive compress, compress of ten days for injuries and eruptions, alternative ten applications to the head and spine, local packs, wet girdle pack, dry abdominal bandage.
Abdominal heating compress, Head pack, Spinal pack
Hot and cold heat compress, Hot and cold lung compress
Hot and cold gastro-hepatic compress
Hot and cold renal compress
Hot and cold intestinal compress
Hot and cold pelvic compress
Hot and cold abdominal pack
Hot and cold spinal pack
Hot and cold pancreatic pack

Special Forms of Compress:

Cephalic compress, Chest pack, Triangular chest pack, half chest compress, joint compress, pelvic pack, foot pack, cold spinal compress, towel chest pack, pericardial or cardiac compress, hip pack, perineal compress, prone packs, lumbar compress.

9. **Internal use of Water**:

Irrigations and enema (Colon Flushing)
Cold water drinking, Hot water drinking
Water emetic, irrigation of ear, Nasal Irrigation,
Vaginal Irrigation, Intra-uterine Irrigation, rectal irrigation
Enema: Hot, warm, cold, graduated enema,
Coloclyster, Retentive Enema, Tonic Enema.

Hydriatic Prescription Making:

(a) The natural defense of the organism
(b) Procedures for increasing vital resistance
(c) Procedures which excite the central ganglia
(d) Procedures that increase oxidation
(e) Measures that encourage general and local metabolic activity
(f) Procedures that increase general blood movement and local blood supply
(g) Measure that increase heat production
(h) Measure that increase the elimination of heat
(i) Measures that combat bacterial development of blood
(j) Measures that increases/lessen heat elimination
(k) Hydria tics incompatibility
(l) Hydrotherapy as a means of rehabilitation and health promotion
(m) Emergency treatments in Hydrotherapy

10. Mud Therapy:

a) Introduction of mud therapy.
b) Classification of mud for therapeutic uses.
c) Precautions of storing Mud.

d) Method of treatment of mud- application, packing hot poultices, effects of mud application on different system of body.
e) Natural mud bath, full and partial mud pack, mud plastor, thermal bath, dry pack, sand pack, sand bath.
f) Cosmetic use of mud.
g) Research paper.

PRACTICAL

1. Demonstration of various therapeutic effects, procedure and treatments in Hydrotherapy during clinical classes at hospital.
2. At the end of the Fourth year BNYS course, candidate should be able to prescribe Hydrotherapy treatments independently.
3. 5 case documentation of all hydriatic applications.
4. Clinical dissertation on case studies with minimum sample size of 20 patients on one general and two local applications.

TEXTBOOKS:-

1. Baths – SJ Singh
2. My Water Cure – Sebastian Kneipp
3. Rational Hydrotherapy – JH Kellogg
4. Healing clay – Michael Abserra
5. Our Earth Our Cure – Raymond Dextroit

REFERENCES:-

1. Handbook of Hydrotherapy – Shew Joel
2. Hydrotherapy in Practice – Davis BC and Harrison RA
3. Medical Hydrology – Sidney Lich

OBSTETRICS AND GYAECOLOGY

Section-A

- Basic Anatomy and Physiology :-
- Physiology of Pregnancy :-
- Physiology of Labor :-
- Physiology of Puerperium
- Pathology of Pregnancy
- Pathology of Labour
- Affection of New-Born
- Obstetrical operations
- Pathology of Puerperium
- Miscellaneous
- Naturopathic Application
- Yogic application

SECTION – B

- Gynecological diagnosis
- Malformation of female genital organs
- Diseases of Vulva
- Diseases of vagina
- Sexually transmitted Diseases in female
- Diseases of urinary system
- Trophoblastic Diseases
- Disorders of menstruation
- Prolapse of uterus
- New Growths of uterus
- Endometriosis and adenomyosis
- Diseases of ovary
- Pelvic Inflammatory Diseases

PRACTICAL

THEROY

Section-A

1 **Basic Anatomy and Physiology :-**

a) Anatomy and Physiology of female genital organs and pelvis.

b) Maturation and fertilization of ovum.

c) Development of Placenta

d) Embryology of uterus.

2 **Physiology of Pregnancy :-**

a) Maternal changes due to pregnancy

b) Diagnosis of pregnancy

c) Differential diagnosis of pregnancy

d) Fetus in normal pregnancy

e) Ante-natal cure.

3 **Physiology of Labor :-**

a) Causation and stages of labor

b) Mechanisms of labor

c) Conduct of Delivery the Natural means

4 **Physiology of Puerperium**

a) Phenomena of normal Puerperium

b) Care of Puerperium

c) Care of new -Born child

5 **Pathology of Pregnancy**

a) Hyperemesis gravidarum
b) Anemia in Pregnancy
c) Diseases of urinary system
d) Diabetes in pregnancy
e) Abortion
f) Ectopic Pregnancy
g) Ante-partum hemorrhage
h) Placenta previa

6 **Pathology of Labour**

a) Occipito -posterior position
b) Breech presentation
c) Multiple pregnancy
d) Contracted pelvis
e) Management of labour in contracted pelvis
f) Complications of 3rd stage of labour

7 **Affection of New-Born**

a) Asphyxia Neonatorum
b) Preterm baby

8 **Obstetrical operations**

a) Forceps
b) Cesarean section
c) Induction of abortion and labor

9 **Pathology of Puerperium**

Puerperal Infections

10 **Miscellaneous**

a) Perinatal mortality and maternal mortality

b) Post-dated pregnancy

c) Placenta Insufficiency

d) Control of contraception

e) Medical Termination of Pregnancy

f) Pre-term labor

11 **Naturopathic Application**

a) Hydrotherapy in Pregnancy

b) Importance of Naturopathic Diet in Pregnancy and Puerperium

c) Underwater delivery

12 **Yogic application**

a) Exercise in -

Ist Trimester

IInd Trimester

IIIrd Trimester

Puerperium

b) Pelvic Floor Exercises

SECTION – B

1 Gynecological diagnosis

2 Malformation of female genital organs

3 Diseases of Vulva

4 Diseases of vagina

5 Sexually transmitted Diseases in female

6 Diseases of urinary system

7 Trophoblastic Diseases

8 Disorders of menstruation

9 Prolapse of uterus

10 New Growths of uterus

11 Endometriosis and adenomyosis

12 Diseases of ovary

13 Pelvic Inflammatory Diseases

PRACTICAL

1 History taking of ante-natal and gynecological cases

2 Demonstration of physical examination of ante-natal and gynecological cases

3 Demonstration of conductive labor normal delivery and use of minor instruments during delivery

4 Demonstration of various equipments used in obstetrics and gynecology

5 Case- history writing of ante-natal and gynecological cases (25)

Recommended Text Books-

1	Clinical obstetrics	-By Mudaliar and menon
2	Shaws Tex book of Gynecology	-By Shaw
3	Text book of Gynecology	-By Dr. Dutta
4	Text book of obstetrics	-By Dr. Dutta
5	Yoga for pregnancy and Natural child birth	

Reference Books-

Illustrated book of obstetrics and Gynecology -By Dr. Gevan

YOGA THERAPY

- Introduction to Yogic Therapy
- Role of Asanas in curing various diseases
- Specific importance of Pranayama in curing various diseases
- Vital role of Bandhas, Mudras, Drishtis, in curing various dieses
- Role of Shat - kriyas in curing various diseases
- Role of general exercises
- The effects of various Yogic practices on different systems of body
- Research methods in Yogic therapy
- Yogic therapy for various diseases
- Meditation and its applications on psycho- somatic disorders
- Yoga & Relaxation techniques
- Teaching methods of Yoga to public, students and patients
- Workshop on Yogic therapy
- Dissertations
- Advanced techniques of Yoga therapy
- Pranic Healing & Reiki Therapy
- Yoga and Mental health
- Applied psychology
- Yoga for – Children, Women, Geriatrics, Technology stress

PRACTICALS

THEORY

1 Introduction to Yogic Therapy/Basis of Yogic Therapy
2 Role of Asanas in curing various diseases
3 Specific importance of Pranayama in curing various dieses
4 Vital role of Bandhas, Mudras, Drishtis, in curing various dieses
5 Role of Shat - kriyas in curing various diseases particularly digestive disorders
6 Role of general exercises
7 The effects of various Yogic practices on different systems Viz : Skeletal system, Endocrine system, Nervous system, Digestive system, Respiratory system, Excretory system, Endocrine system, Cardio - Vascular system, Muscular system, reproductive system

8 Research methods in Yogic therapy, statistical analysis etc.

9 Yogic therapy for:

a. Cardio- vascular diseases
b. Psychiatric diseases
c. Mental retarded diseases
d. Neuro - Muscular disease
e. Gastro - intestinal disease
f. Hormonal diseases
g. Respiratory disorders
h. Metabolic disorders
i. Ophthalmologic disorders
j. Pediatric disorders
k. E.N.T. Disorders
l. Obstetrics & Gynecology disorder

10. Meditation and its applications on psycho- somatic disorders

11. Yoga & Relaxation techniques
a. QRT-Quick Relaxation Technique
b. IRT- Instant Relaxation technique
c. DRT- Deep Relaxation technique

12. Teaching methods of Yoga to public, students and patients. Models lesson planning and adoption of Yoga in education system, limitations, vidhi and Nisheda (right and wrong)

13. Workshop on Yogic therapy
14. Dissertations
15. Advanced techniques of Yoga therapy
16. Pranic Healing & Reiki Therapy

17. Yoga and Mental health- total integration of personality, correct mental behavior and attitude, hormonal relationship of body and mind, self-content tranquilizing effect , psychology of spiritual growth and spiritual value, toning judgment, pure consciousness, mode of living and disciplined life.

18. Applied psychology:-
    a. Stress -Its causes, effects and control
    b. Historical perspective, identifying psychological disorders
        I. Anxiety Disorders
        II. Dissociative Disorders
        III. Somatoform Disorders
        IV. Sexual Disorders
        V. Mood Disorders
        VI. Personality Disorders
        VII. Schizophrenia
    c. Therapy for psychological disorders:- Psychotherapy, therapy of Interpersonal relations, behavioral therapy , Yogic counseling

19. Yoga for – Children, Women, Geriatrics, Technology stress

PRACTICAL

1. Analysis of Yoga technique by Static method
2. Preparation of charts and posters for Public health education.
3. Case History taking and determining the effect of Yogic practice on patients

REFERENCE BOOKS:-

1. Yogic therapy — By Dr. Vinokar, Govt. of India. publication.
2. Treatment of common Disease through Yoga. — By Swami Satyananda Saraswati.
3. Seminars on Yoga, Science & Man — By CCRYN, Delhi Publication.
4. Yoga Nidra — By Swami Satyananda Saraswati.
5. Pranic Psychotherapy — By Choa Kok Sui.

HOSPITAL MANAGEMENT &

RESEARCH METHODOLOGY

- Hospital Administration
- Managerial Skills
- Hospital Organization
- The Hospital
- The Clinical Services & Clinical Supportive Services
- The Nursing services
- Specialised Service Areas
- Human Resources
- Material Management
- Finances
- Quality Management in our Hospitals.

PRACTICALS

RESEARCH METHODOLOGY

- Introduction
- Planning a research Project
- Design of the study
- Statistics
- Parameters to be recorded for specific diseases
- Project Preparation for Clinical Research
- Bioethics
- Ethical Issues in clinical trials
- Recent research update in Naturopathy & Yoga.
- Psychological Aspects in Yoga Research
- Status of Research in India on naturopathy and Yoga

THEROY

Section-1- Hospital Administration

Role and Responsibilities, Profile of an effective Hospital Administrator.

Section-2- Managerial Skills –

1. Planning
2. Information System
3. Communication
4. Decision Making
5. Monitoring Time
6. Managing Time
7. Meetings

Section-3- Hospital Organization

1. Hospital Organization – Structure and Function
2. Hospital Committees.

Section-4- The Hospital-

1. Role of Hospital in Health Care.
2. Hospital Planning and Design.
3. Special feature of Nature cure Hospital, Qualities of Therapist, Hospital Atmosphere, Scientific Attitude, Awareness of Scope, Limitation of Nature Cure.
4. Newer Technology in Treatment through Naturopathy.

Section-5-THE CLINICAL SERVICES & CLINICAL SUPPORTIVE SERVICES

1. The Medical Staff Organization, interaction with patient.
2. Radiological Service
3. Laboratory Services

Section-6-THE NURSING SERVICES

1. Nursing Services

Section-7- SPECIALISED SERVICE AREAS

1. Casualty services
2. Disaster, Be prepared
3. Outpatient Service
4. Day Care
5. Diagnostic Services
6. Medical Records.

Section-8 HUMAN RESOURCES

1. Personnel

Section-9-MATERIALS MANAGEMENT

Section-10 FINANCES

1. Finances
2. Activity Based costing in Hospital
3. Economics of H.M.

Section-11 QUALITIES ASSURANCE

1. Quality Management in our Hospitals.

PRACTICALS

1. Visit to the different Hospitals
2. Project work in planning &Designing the Hospital

REFERENCE BOOKS

1. Hospital Planning & Administration - Lieweliyn Davies Macaualy, -H.M.C.
2. Hospital Administratin - Francis C.M. & Maria C. Desouza
3. Text Book of Social & Preventive Medicine - Park K
4. Economics of Health Care - Mrtin Green
5. Principle of Hospital Administration & Planning- B.M. Sakharkar

RESEARCH METHODOLOGY

a. Introduction
b. Planning a research Project
c. Design of the study
d. Statistics
e. Parameters to be recorded for specific diseases Obesity Diabetes mellitus Hypertension Asthma Lumbago Rheumatoid Arthritis.
f. Project Preparation for Clinical Research
g. Bioethics
h. Ethical Issues in clinical trials
i. Recent research update in Naturopathy & Yoga.
j. Psychological Aspects in Yoga Research
k. Status of Research in India on naturopathy and Yoga

RECOMMENDD BOOKS :

1. Research Methods - By Dr. H.R. Nagendra

2. Research Methodology – By CCRN, New Delhi in Naturopathy & Yoga

3. Fundamentals of Evidence based Medicine – By Kamleshwar Prasad

4. Research Reports From 1981 to 2006 – By INYS (Jindal Nature Cure Institute)

CLINICAL NATUROPATHY

- Case History taking according to Naturopathy
- Integrative approach of Naturopathy treatments
- Naturopathic Prescription making and management of systemic disorders
- Good clinical practice – Guidelines and standards
- Important modes and methods for Natural rejuvenation.

PRACTICALS

Theory

1. Case History taking according to Naturopathy.

2. **Integrative approach of Naturopathy treatments** – Design of treatment protocol, Diet Planning etc., Patient Treatment Plan.

3. **Naturopathic Prescription making and management of following disorders-**

    1. Cardiovascular Disorders
    2. Gastrointestial Disorders
    3. Blood Related Disorders
    4. Respirotory Disorders
    5. Neurological Disorders
    6. Psychiatric Disorders
    7. Musculokeletal Disorders
    8. E.N.T. Disorders
    9. Ophthalmology Disorders
    10. Obstetrics & Gynaecology Disorders
    11. Paediatric DISORDERS
    12. Metabolic DISORDERS
    13. Hormonal DISORDERS
    14. Neuromuscular DISORDERS
    15. Mental Retardation DISORDERS
    16. Psychological DISORDERS
    17. Sexual DISORDERS
    18. Post Surgical Rehabilitation
    19. Post Chemotherapy Rehabilitation
    20. Skin Disorders
    21. Tumors & Cancers
    22. Affections Due To Parasites
    23. Affections Due To Physical Agents & Intocicants
    24. Care Of Wounds, Burns, Bites & Stings
    25. Accidents & Emergencies

4. Good clinical practice – Guidelines and standards

5. Important modes and methods for Natural rejuvenation.

PRACTICAL

1. Case history taking, documentation and complete management protocol of at least 30 cases.
2. Clinical dissertation on any one disease involving multiple patients.

TEXTBOOK

1. Clinical naturopathy: An Evidence based guide to practice- Jerome Sarris, Jon Wardle.

2. Clinical Naturopathic Medicine- Lash Hechtman.

3. The Clinician's Handbook of Natural Medicine- Joseph E. Pizzorno Jr

4. Fasting- The Ultimate Diet – Allan Cott.

5. Mucusless Diet Healing System – Arnold Ehret.