INDIRA GANDHI TECHNOLOGICAL AND MEDICAL SCIENCES UNIVERSITY (IGTAMSU) ZIRO (ARUNACHAL PRADESH)

REGULATIONS, SYLLUBUS AND CURRICULUM FOR UNDER– GRADUATE COURSE

BACHELOR OF NATUROPATHY AND YOGIC SCIENCES (B.N.Y.S)

2024

CONTENTS

I. REGULATIONS

SYLLABUS

BNYS - Ist Year

S.NO.	SUB.CODE	SUBJECT NAME
1.	101.	Biochemistry
2.	102.	Philosophy & Practice of Yoga
3.	103.	Human Anatomy I
4.	104.	Human Anatomy II
5.	105.	Human Physiology I
6.	106.	Human Physiology II
7.	107.	Philosophy of Nature cure I
8.	108.	Philosophy of Nature cure II

BNYS - IInd Year

S.NO.	SUB.CODE	SUBJECT NAME
1.	201.	Pathology I
2.	202.	Pathology II
3.	203.	Microbiology
4.	204.	Yoga & Physical Culture-l
5.	205.	Diagnostic Methods in Naturopathy
6.	206.	Diagnostic Methods in Modern Medicine
7.	207.	Basic Pharmacology

BNYS - IIIrd Year

S.N0.	SUB.CODE	SUBJECT NAME
1.	301.	Forensic Medicine & Toxicology
2.	302.	Community Medicine
3.	303.	Psychology & Basic Psychiatry
4.	304.	Obstetrics & Gynecology
5.	305.	Yoga & Physical Culture - II
6.	306.	Nutrition & Herbology
7.	307.	Massage, Chiropractics, Osteopathy & Aromatherapy

BNYS - IVth Year

S.NO.	SUB.CODE	SUBJECT NAME
1.	401.	Yoga Therapy
2.	402.	Hydrotherapy
3.	403.	Fasting & Diet Therapy
4.	404.	Clinical Naturopathy
5.	405.	Physiotherapy
6.	406.	Acupuncture, Acupressure & Reflexology.
7.	407.	First Aid & Emergency Medicine
8.	408.	Research Methodology and Recent advances

NOTE:

1. Human Anatomy I & Human Anatomy-II are considered as single subject.
2. Human Physiology-I & Human Physiology-II are considered as single subject.
3. Philosophy of Nature Cure I & Philosophy of Nature Cure II are considered as single subject.
4. Pathology-I & Pathology-II are considered as single subject.

INTERNSHIP

Compulsory Rotatory Resident Internship Training (C.R.R.I.T)

IGTAMSU UNIVERSITY ZIRO

REGULATIONS OF THE UNIVERSITY

In exercise of the powers conferred by the Govt. of Arunachal Pradesh , IGTAMSU UNIVERSITY Ziro , the Standing Academic Board of the IGTAMSU Medical University, Ziro hereby makes the following regulations:-

1. SHORT TITLE AND COMMENCEMENT: -

These regulations shall be called **"THE REGULATIONS FOR THE BACHELOR OF NATUROPATHY AND YOGIC SCIENCES (B.N.Y.S.) DEGREE COURSE OF** IGTAMSU UNIVERSITY ZIRO"

They shall come into force from the academic year 2017-18. The Regulations and Syllabus are subject to modification by the Standing Academic Board from time to time.

2. AIMS AND OBJECTIVES

The course is aimed at overcoming the lack of properly trained personnel in the field of Naturopathy and Yogic Sciences experienced at present and to fulfill the need of therapists in Yoga and Nature cure with a proper scientific background in sufficient numbers.

3. MINIMUM ELIGIBILITY CRITERIA FOR ADMISSION

(a) Candidates seeking admission to the Bachelor of Naturopathy and Yogic sciences course should have passed at the qualifying examination (Academic stream) after a period of 12 years of study (10 + 2) with the following subjects: Physics, Chemistry, Biology (Botany,& Zoology) with community wise eligibility marks as detailed below :

SL..No.	Community
1.	O.C
2.	B.C
3.	M.B.C
4.	S.C/S.T.

COMMUNITY O.C

Minimum Eligibility marks Minimum of 60% marks in Biology or Botany and Zoology taken together. 60% marks in each of Physics and Chemistry. Aggregate should not be less than 140 out of 200.

COMMUNITY B.C

Minimum of 60% marks in Biology or Botany and Zoology taken together. 60% marks in each of Physics and Chemistry. Aggregate should not be less than 130 out of 200.

COMMUNITY M.B.C

Minimum of 55% marks in Biology or Botany and Zoology taken together. 55% marks in each of Physics and Chemistry. Aggregate should not be less than 120 out of 200.

COMMUNITY S.C /S/T

Minimum of 40% marks in Biology or Botany and Zoology taken together. 40% marks in each of Physics and Chemistry. Aggregate should not be less than 80 out of 200.

The above modifications shall take effect for the candidates admitted from 2017-2018 batch admission onwards.

a) With effect from 2018 candidates who qualify for NEET get automatically qualified

(b) Candidate who have passed any qualifying examination other than the Higher Secondary Course examination conducted by the Government of Arunachal Pradesh shall obtain an Eligibility Certificate from the University by remitting the prescribed fees along with the filled in application form and the original certificates as required before seeking admission

4. AGE LIMIT FOR ADMISSION

Candidate should have completed the age of 17 years at the time of admission or would complete the said age on or before 31st December of the year of admission to the first year B.N.Y.S. course.

5. DURATION OF THE COURSE

Duration of the course will be 4 1/2 years with 1 (one) year internship. The course will be divided into four parts.

1st BNYS-11/2 Years (18 Months)

2nd BNYS - 1Year (12 Months)

3rdBNYS-1Year (12 Months)

4th BNYS -1Year (12 Months)

After completing the course successfully, a graduate will have to undergo internship for a period of one year. Degree will be awarded only after satisfactorily completing the one-year Period of internship.

6. COMMENCEMENT OF THE COURSE

The academic year for B.N.Y.S. course shall commence from 1st August of the year.

7. COMMENCEMENT OF EXAMINATION

September / June

Theory examinations not to be held on Saturday and Sunday. If the date of commencement of the examination falls on public holiday, the next working day will be the date of commencement of examinations.

8. CUT-OFF DATE FOR ADMISSION TO EXAMINATION:

The candidates admitted up to 30 October shall be registered to take up their I Professional Part-l examination during August of the next year and Part -I I examinations during February of the subsequent year. All kinds of admissions shall be completed on or before 30 October of the academic year. There shall not be any admissions after 30th October, even if seats are vacant.

9. ENROLLMENT OF CANDIDATES:

The candidates admitted provisionally shall apply to this University by the College for Enrollment within 7 days from the date of admission in a prescribed form, which shall be downloaded from the University Web Site www.igtamsu.ac.in www.indiragandhiuniversity.in along with provisional admission card issued by the College/Selection Committee, Eligibility Certificate for Non-Higher Secondary Course and other State candidates for the course and a fee of Rs.250- or that may be prescribed by the authorities of the University from time to time.

10. REGISTRATION:

A candidate admitted in B.N.Y.S. degree course in any of this University shall register his/her name by submitting the prescribed application form for Registration duly filled, along with the prescribed fee and an undertaking in the format, as in Annexure I of the Regulation for re-admission after break of study to the Controller of Examinations of this University

through the Head of the affiliated Institutions within 60 days from the cut-off date prescribed for B.N.Y.S course for admission.

11. MEDIUM OF INSTRUCTION

The Medium of instruction for the BNYS degree course shall be in English.

12. CURRICULUM

The curriculum and syllabus for the course shall be as prescribed by the Standing Academic Board from time to time.

13. WORKING DAYS IN AN ACADEMIC YEAR

Each academic year shall consist of not less than 200 working days.

14. ATTENDANCE REQUIRED FOR ADMISSION TO EXAMINATION

a) No candidate shall be permitted to appear for any one of the parts of B.N.Y.S. examinations unless he has attended the course in the subject for the prescribed duration/hours of study in by this University and produce necessary certificate of study, attendance, satisfactory conduct and progress from the Head of the Institution.

b) A candidate is required to put in minimum 75 % of attendance as mandatory in both theory and practical separately in each subject before admission to the examination, including Yoga practical class for one hour daily throughout the course.

c) A candidate lacking in the prescribed attendance and progress in any one subject in theory and practical shall not be permitted for admission to the entire examinations in the first Appearance.

15. RE-ADMISSION AFTER BREAK OF STUDY

For the students admitted from 2017-18 batch onwards, please refer separate Re-admission after Break of Study

Regulations of this University.

16. SUBMISSION OF LABORATORY RECORD NOTE BOOKS

At the time of practical examination, each candidate shall submit to the Examiners his / her laboratory note books duly certified by the Head of the Department as a bonfire record of

The work done by the candidate. The concerned Head of the Department shall evaluate the Practical record (Internal Evaluation) and the practical record marks shall be submitted to the University 15 days prior to the commencement of the theory examinations. In respect of failed candidates, the marks awarded for record at previous examinations will be carried over for the subsequent examination or the candidates shall have the option to improve his performance by submission of fresh records.

17. INTERNAL ASSESSMENT

A minimum of three written examinations shall be conducted in each subject during an academic year and the average marks of three best performances shall be taken into consideration for the award of sessional marks.

A minimum of two practical examinations shall be conducted in each subject during an academic year and one best performance shall be taken into consideration for award of sessional marks. A failed candidate in any subject should be provided an opportunity to improve his session marks by conducting a minimum of two examinations in theory and practical separately and the average may be considered for improvement.

The Internal assessment marks (both in written and practical taken separately) should be submitted to the University duly endorsed by the Head of the Institutions 15 days prior to the commencement of the theory examinations.

18. RETOTALLING OF ANSWER PAPERS:

There **is no provision** for Revaluation of Answer papers and only re totaling of Answer papers in the failed subject is allowed.*

19. EXEMPTION FROM RE-EXAMINATION IN A SUBJECT

Candidate who failed in the examination but obtained pass marks in any subject shall be exempted from re-examination in that subject(s).

20. CARRY-OVER OF FAILED SUBJECTS

A candidate is eligible for carry over facility in the following manner;

a) First Year to Second Year- 3 Subjects.

b) Second Year to Third Year- 3 Subjects.

c) Third Year to Final Year- 3 Subjects.

21. MIGRATION/TRANSFER

Migration / Transfer of candidates from one recognized institution to another recognized institution of this university shall be granted on the following conditions:

a) All Migration/Transfers are subject to the approval of the Vice-Chancellor.

b) Transfer shall be affected only at the beginning of the academic year.

c) The Transfer application should be in the prescribed form as stipulated by the University and sent through proper channel to the Academic Officer within three months of publication of the results or admission to the course.

d) Transfers can be affected during any year of study after fulfillment of the regulations of this University.

e) Transfers will be affected subject to the condition that the sanctioned strength of that institution in that particular year is not exceeded.

f) The Provision of combination of attendance shall be granted to the transferee for admission to the examination of this University on satisfactory fulfillment of the regulations of this University.

22. SUBJECTS OF STUDY

BNYS - Ist	**Duration**	**Hours**
1. Biochemistry	- 18 Months	- 250 hours
2. Philosophy & Practice of Yoga	- 18 Months	-300 hours
3. Human Anatomy I		
4. Human Anatomy II	- 18 Months	-300 hours
5. Human Physiology I		
6. Human Physiology II	- 18 Months	-300 hours
7. Philosophy of Nature Cure I		
8. Philosophy of Nature Cure II	- 18 Months	-250 hours
(including fundamentals of Ayurveda, Siddha, Unani, Homoeopathy and Allopathy)		

BNYS - IInd	**Duration**	**Hours**
1. Pathology I		
2. Pathology II	- 1 Year	-200 hours
3. Microbiology	- 1 Year	-200 hours
4. Yoga & Physical Culture I	- 1 Year	-200 hours
5. Diagnostic methods in Naturopathy	-1 Year	- 200 hours
6. Diagnostic methods in Modern Medicine	- 1 Year	-200 hours
7. Basic Pharmacology	- 1 Year	-150 hours

BNYS - IIIrd	**Duration**	**Hours**
1. Forensic Medicine & Toxicology	- 1 Year	-200 hours
2. Community Medicine	- 1 Year	-200 hours
3. Psychology & Basic Psychiatry	- 1 Year	-200 hours
4. Obstetrics & Gynecology	- 1 Year	-200 hours
5. Yoga & Physical Culture II	- 1 Year	-200 hours
6. Nutrition & Herbology	- 1 Year	-200 hours
7. Massage, Aromatherapy, Chiropractics & Osteopathy	- 1 Year	-200 hours

BNYS - IVth	**Duration**	**Hours**
1.Yoga Therapy	- 1 Year	-200 hours
2.Hydrotherapy & Clay Therapy	- 1 Year	-200 hours
3.Fasting & Diet therapy	- 1 Year	-200 hours
4.Clinical Naturopathy	- 1 Year	-200 hours
5) Physiotherapy	- 1 Year	-200 hours
6. Acupuncture, Acupressure, & Reflexology.	- 1 Year	-200 hours
7. First aid & Emergency medicine	- 1 Year	-200 hours
8. Research methodology & Recent advances.	- 1 Year	-150 hours

23. RESTRUCTURED QUESTION PATTERN IN GENERAL:-

The following examination pattern uniformly for the BNYS course which shall come into force for all the candidates who have to appear for the examination in all years of studies commencing from sept 2017 onwards.

Question Type	**Marks per paper**	**Time**
Eight Short questions, each 02 mark (08*02)	16 Marks	20 Min.
Three Essay Question – Each 10 Marks (3*10)	30 Marks	1 Hour
Six Small essay questions – Each 4 Marks (6*4)	24 Marks	1.40 Hours
TOTAL	**70 Marks**	**3 Hour**

24. DISTRIBUTION OF MARKS, WEEKLY CREDITS & WEEKLY CLASS HOURS

In order to enhance the quality of education and to bring about transparency in the system of evaluation, Indira Gandhi Technological And Medical Sciences University introduces in its curriculum Credit-Based Continuous Evaluation Grading System with effect from the academic session 2024-2025.

BNYS –IST YEAR (18 MONTHS)										
Paper	**T**		**P**			**Total**	**Weekly class hours & credits**			
	W	IA (T)	O/PT	IA (P)	R		Weekly credits (T)	Weekly class hours (T)	Weekly credits (P)	Weekly class hour (P)
1 BIOCHEMISTRY	70	30	70	20	10	200	03	03	01	02
2. PHILOSOPHY & PRACTICE YOGA	70	30	70	20	10	200	03	03	03	06
3. HUMAN ANATOMY –I	70	30								
4.HUMAN ANATOMY-II	70	30	70	20	10	300	04	04	01	02
5. HUMAN PHYSIOLOGY-I	70	30								
6.HUMAN PHYSIOLOGY-II	70	30	70	20	10	300	04	04	01	02
7. PHILOSOPHY OF NATURE CURE -I	70	30								
8. PHILOSOPHY OF NATURE CURE -II	70	30	70	20	10	300	03	03	1/2	01
Grand total						1300				

BNYS – IInd YEAR (12 MONTHS)										
PAPER	**T**		**P**			**Total**	**Weekly class hours & credits**			
	W	IA (T)	O/PT	IA	R		Weekly credits (T)	Weekly class hours (T)	Weekly credits (P)	Weekly class hour (P)
1. PATHOLOGY I	70	30								
2. PATHOLOGY –II	70	30	70	20	10	300	03	03	01	02
3. MICROBIOLOGY	70	30	70	20	10	200	03	03	01	02
4. YOGA & PHYSICAL CULTURE-I	70	30	70	20	10	200	03	03	03	06
5. DIAGNOSTIC METHODS IN NATUROPATHY	70	30	70	20	10	200	03	03	01	02
6. DIAGNOSTIC METHODS IN MODERN MEDICINE	70	30	70	20	10	200	03	03	01	02
7. BASIC PHARMACOLOGY	70	30	70	20	10	200	03	03	-	-
GRAND TOTAL						1300				

BNYS IIIrd YEAR (12 MONTHS)										
PAPER	T		P			Total	Weekly class hours & credits			
	W	IA (T)	O/PT	IA (P)	R		Weekly credits (Theory)	Weekly class hours (Theory)	Weekly credits (P)	Weekly class hour (P)
1 FORENSIC MEDICINE & TOXICOLOGY	70	30	70	20	10	200	03	03	½	01
2 COMMUNITY MEDICINE	70	30	70	20	10	200	03	03	½	01
3 PSYCHOLOGY & BASIC PSYCHIATRY	70	30	70	20	10	200	03	03	01	02
4 OBSTETRICS & GYNAECOLOGY	70	30	70	20	10	200	03	03	01	02
5 YOGA & PHYSICAL CULTURE - II	70	30	70	20	10	200	02	02	03	06
6 NUTRITION & HERBOLOGY	70	30	70	20	10	200	03	03	01	02
7 MASSAGE, CHIROPRACTICE, OSTEOPATHY & AROMATHE100RAPY	70	30	70	20	10	100	03	03	01	02
GRAND TOTAL						1400				

BNYS IVth YEAR (12 MONTHS)										
PAPER	UE		P			Total	Weekly class hours & credits			
	W	IA (T)	O/PT	IA (P)	R		Weekly credits (Theory)	Weekly class hours (Theory)	Weekly credits (P)	Weekly class hour (P)
1 YOGA THERAPY	70	30	70	20	10	200	02	02	06	06
2 HYDROTHERAPY & CLAY THERAPY	70	30	70	20	10	200	03	03	1	2
3 FASTING AND DIET THERAPY	70	30	70	20	10	200	03	03	1	2
4 CLINICAL NATUROPATHY	70	30	70	20	10	200	03	03	1	2
5 PHYSIOTHERAPY	70	30	70	20	10	200	03	03	1	2
6 ACUPUNCTURE , ACUPRESSURE , REFLEXOLOGY, REIKI AND PRANIC HELAING	70	30	70	20	10	200	03	03	1	2
7 MINOR SURGERY , FIRST AID & EMERGENCY MEDICINE	70	30	70	20	10	200	03	03	1	2
8 RESEARCH METHODOLOGY & RECENT ADVANCES	70	30	70	20	10	200	03	03	½	1
GRAND TOTAL						1600				

T - Theory

P- Practical

Marks IA - Internal Assessment

W - Written

R - Record

PT - Practical tests

O - Oral

MARKS QUALIFYING FOR A PASS –

50% of marks in the University Written Exam 50/100

50% of marks in the University Practical Exam 50/100

25. INTERNSHIP:

Time allocation to each discipline is approximate and shall be guided more specifically by the actual experience obtained.

COMPULSORY POSTINGS	**DURATION**
1. Nutrition, Fasting	: One month.
2. Massage, Aromatherapy, Chiropractic & Osteopathy.	: One month.
3. Hydrotherapy, and Clay therapy	: One month.
4. Acupuncture, Acupressure & Reflexology	: One month
5. Yoga therapy	: One month.
6. Diagnostic Methods in Naturopathy & Yoga & Modern Diagnostic Methods	: One month.
7. Obstetrics & Gynecology with Family Welfare Planning	: One month.
8. Community Medicine	: One month.
9. Minor Surgery, First Aid & Emergency Medicine	: One month.
10. Physiotherapy	: One month.
11. Psychology and Psychiatry	: One month.
12. Dietetics & Herbology	: One month

Bachelor of Naturopathy and Yogic Sciences

(A Five & half years Degree Course)

(B.N.Y.S.)

CURRICULUM AND SYLLABUS

B.N.Y.S. Ist Year (Duration -18 months)

SL. NO.	SUBJECT	Duration of Study
1.	Biochemistry	18 Months
2.	Philosophy and Practice of Yoga	18 Months
3.	Human Anatomy I	
4.	Human Anatomy II	18 Months
5.	Human Physiology I	
6.	Human Physiology II	18 Months
7.	Philosophy of Nature cure I	
8.	Philosophy of Nature cure II	18 Months

(Including fundamentals of Ayurveda)

Siddha, Homeopathy, Unani & Allopathy)

PRACTICALS: Biochemistry, Anatomy, Physiology, PNC, & PPY

BIOCHEMISTRY

(Duration of study - 18 months)

THEORY

01. Introduction and Prospects.

02. Hydrogen ion concentration, acids, bases, buffers, Henderson -Haselbasch Equation.

03. Principles of colorimetry, Paper chromatography and Electrophoresis.

04. Amino acids - classification, structure, properties and side chains of amino acids.

05. Peptides - Biological importance of peptides structure of Insulin.

06. Proteins - Definition, Biological importance, classification and properties, structure of proteins, coagulation and denaturation of proteins.

07. Elementary aspects of the structure of collagen, Myoglobin and Hemoglobin.

08. Enzymes - Definition, classification, specificity, coenzymes, co-factors and activators. Diagnostic importance of enzyme and iso-enzymes.

09. Carbohydrates - Definition, classification and biological importance, Monosaccharide's-classification, properties and stereo isomerism, oligosaccharides - importance of Disaccharides.

10. Polysaccharides-Functions.

11. Lipids - Definition, classification and biological importance.

1. Simple lipids: Composition of Tri glycerol, Waxes.

2. Compound Lipids: Function of Phospholipids, spongiolipids, & glycolipids.

3. Derived lipids: Functions of fatty acids - properties of saturated and unsaturated fatty acids.

12. Nucleic acids: Definition, classification, composition and biological importance of nucleic acids, purines and pyrimidine bases.

.Structure of DNA.

Structure, function and types of RNA.

13. Vitamins - Definition and classification. Brief account of source, biochemical function deficiency diseases,

Vitamin antagonists.

Hyper avitaminosis .

14. Minerals - Calcium, Phosphorous, iron, copper, 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 absorption of carbohydrates, lipids, proteins and nucleic acids.

17. Carbohydrate Metabolism - Glycogenesis, glycogenolysis and Krebs's cycle, glycolysis, pyruvate oxidation, citric acid cycle, Gluconeogenesis, Metabolism of Fructose and Galactose, regulation of metabolic pathways, disorders of carbohydrate metabolisms, regulation of blood sugar, glucose tolerance test, diabetes mellitus.

18. Biological oxidation - Oxidative phosphorylation.

19. Lipid Metabolism - Lipogenesis, synthesis of fatty acids, de-saturation, phospholipids, Bio-synthesis of lecithin, Cephalin and their breakdown oxidation of fatty acids, formation and utilisation of ketone bodies, ketosis, synthesis and breakdown of cholesterol, disorders of lipid metabolism, outlines and formation and functions of prostaglandin's and leukotrienes, fatty liver and lipotropic factors.

20. Metabolism of proteins and amino acids - Breakdown of tissue proteins, amino acids pool, general metabolism of amino acids, disposal of ammonia, urea cycle formation of glutamate and glutamine, disorders of amino acids
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 heme, functions of Hemoglobin, abnormal hemoglobin, 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, De-toxification, 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 food or unbalanced 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's - glucose and fructose.
3. Reactions of disaccharides - lactose, maltose and sucrose.
4. Reactions of polysaccharides - starch and dextrin
5. Reactions of proteins - albumin, casein and gelatin.
6. Coagulation and precipitation reactions of proteins.
7. Reaction of non-protein-nitrogen (N P N) - Urea, Uric acid and creatinine.
8. Analysis of Milk.
9. Normal constituents of urine.
10. Analysis of abnormal urine.

SECTION II

1. Demonstration of:

(a) Blood sugar

(b) Blood urea

(c) Total serum protein

(d) Total serum calcium

(e) Total serum cholesterol

(f) Total serum bilirubin

2. Demonstration of:

(a) Sugar in CSF

(b) Proteins in CSF

(c) Chlorides in CSF

3. Determination of albumin, urea and sugar in urine.
4. Demonstration of SCOT and SGPT
5. Demonstration of principles of:

(a) Colorimetry and colorimeter

(b) Paper chromatography

(c) Electrophoresis

(d) Glucose tolerance test (GTT)

(e) Flame Photometry

Note:

1. Section I -the students in biochemistry laboratory shall conduct I Practical's.
2. Section - II of practical shall be conducted by teaching staff as a part of demonstration / seminar in the laboratory.

Recommended Books:

1. Hyper's review of physiological chemistry - by Harper.
2. Textbook of Biochemistry - by West and Todd.
3. Laboratory manual of biochemistry - by Pattabhiraman and Acharya.
4. Laboratory manual in biochemistry - by Rajgopal and Ramkrishnan.

PHILOSOPHY AND PRACTICE OF YOGA

(Duration of study - 18 months)

THEORY

1. What is Yoga? And various definition of Yoga. (As per Maharishi Patanjali, SriMad Bhagwat Gita, Sri Aurobindo, Swami Vivekananda, Yoga Vasistha).

2. History of Yoga, (relative chronology, Yoga before the time of Patanjali, Indus valley civilization, Veda, Brahmanas, Upanishads,Epics, Puranas and Smriti literature).

3. Original system of Yoga (Hiranyagrbha-yoga)

(a) Sankhya and yoga (b) Buddhism and yoga (c) Jainism and yoga

(d) Systamatisation of yoga by sage pantanjali (e) Contribution of Vyasa's commentory to patanjali yoga.

4. Astanga Yoga or Eight Limbs of Yoga with understanding of basics including Yama, Niyama, Asana, Pranayama, etc- the comparative and distinctive advantage of each.

5. Contemporary yoga, scientific and textual research studies.

6. Pancha Kosha Viveka –Yogic concept of human body, Pancha Pranas , Pancha uppranas, Astachakra

7. Outlines on Branches of yoga-Raja, hatha, jnana, karma, bhakti ,jnana Yoga mantra, kundalini and laya.

8. Introduction to Yogasanas

(a) Definitions for Yogasanas, Animal postures

(b) Yogasanas and prana

(c) Yogasanas and Kundalini

(d) Yogasanas and the body mind connection

(e) Yogasanas and exercises.

(f) Human values and health

9. Classification of yogasanas - beginners group, intermediate group, advanced group, dinamic and static yogasanas.

10. Rules and regulations for Yogasanas.

11. The scope and sphere of Yoga in contemporary world. The scope , extent of scientific - medical research in the field of Yoga

12. Introduction to Pranayama

(a) Definition

(b) Pranic Body

(c) Prana and life style

(d) Breath, health and pranayama

(e) Breathing and life span

(f) Pranayama and spiritual aspirant

13. Rules and Regulations for the Pranayama Practice.

(1.) <u>YOGABHAYAS (PRACTISE)</u>

1) Starting of Yoga session with Omkaara, starting Prayers, meaning of starting prayers
2) Shookshma Vyama or loosening exercises
3) Warming up exercises - including Jogging, skipping etc
4) Suryanamaskar
5) Tadaasana
6) Sithali Tadaasana
7) Vrikshasana
8) Trikonasana
9) Virbhadraasana I, ii , iii
10) Padangustasana
11) Parivritta Trikonasana
12) Prasaritta Pdotanasana
13) Parsvakonasana
14) ParivrittaParsvakonasana
15) Vajraasana
16) Dandaasana
17) Janusirsasna
18) Paschimotasana
19) Pawan Muktasana
20) Parivriitajanusirsasana
21) SalabhAsana
22) Bhujangasana
23) Dhanurasana
24) Shasankasana
25) Ushtrasana
26) SuptVajrasana
27) Vakraasana
28) Setubhandanasana
29) Ardhamatsyendrasana
30) MarjariAsana
31) Sarvangasana
32) Halasana
33) Matsyaasana

34) Shavasana, DRT
35) Closing Prayers etc

(2.) PRANAYAMA

a) Yogic Breathing
b) Nadisodhana Pranayama
c) Anulom Viloma
d) Kapalbhati
e) Brahmari
f) Sohum

BOOKS RECOMMENDED: -

1. The history of yoga - vivian worthinton
2. The psychology of yoga - Taimni.
3.. The science of yoga - (do)
4.. Anatomy of Hatha Yoga – H. David Coutler
5. The basis and application of yoga-Dr. Nagendra.

(Vivekananda Kendra)

6. Jnana Yoga, Bhakti Yoga,Karma Yoga, Raja Yoga – By Swami vivekananda
7.. Narada Bhakti Sutras.
8. Asanas.
9. Pranayama (Kaivalyadhama lonavla publications)
10. Human Values and Health – Dr. Mrs Charanjit Ghooi.
11. Pranayama - Vivekananda kendra
12. Yoga philosophy in relation to other system of philosophy - S.N. Dasgupta.
13. Yoga Deepika-B.K.S. lyengar.
14. Psychology - Florance C. Kenip.
15. Asana,Pranayama,Mudra Bandha - Bihar School of Yoga,Munger.Bihar
16. Yog a- Mimamsa journal (Back Volumes),Kaivalyadama,Lonavala
17. HathaYogaPradhibika-BSY
18 Light on Pranayama – BKS Iyengar
19 Bks Iyengar – The Path to Holistic health
20 Power Pranayama – Renu Mahatani
21 Yoga for You- Indira Devi

HUMAN ANATOMY-I

(Duration of study - 18 months)

THEORY

I. GENERAL INTRODUCTION:

Importance of the study of Anatomy

1. Definitions & Sub divisions
2. Systems of the body
3. Structure of the cells
4. Terminology, Anatomical positions, Planes, & Surfaces.

II. OSTEOLOGY: (Including Ossification & Related Histology)

1. Types of Bones.
2. Classification of Bones.
3. Description of various bones of:
   (a) Upper limb
   (b) Thorax
   (c) Abdomen and pelvis
   (d) Vertebral column including cervical region

III. ARTHROLOGY:

1. Classification of Joints
2. Construction of Joints
3. Description of various joints of:
   (a) Upper limb
   (b) Thorax
   (c) Pelvis
   (d) Vertebral column

IV. MYOLOGY;

1. Types of Muscles
2. Muscles of Upper limb, Thorax, Abdomen and Pelvis
3. Origin, insertion, Blood supply, nerve supply and actions of these muscles

V. RESPIRATORY SYSTEM:

1. Upper respiratory tract-Nose, Pharynx, larynx
2. Trachea & Bronchial tree.

3. Lungs

4. Pleura

5. Mediastinum

VI. CARDIOVASCULAR SYSTEM:

1. Heart - Position, Surface anatomy and its description.

2. Great vessels - Aorta, Pulmonary trunk, superior vena cava,
inferior vena cava and their branches.

3. Arteries and Veins - Structure of arteries and veins, important arteries & veins of the body.

VII.DIGESTIVE SYSTEM:

Oral cavity, Teeth, Hard palate, Soft palate. Esophagus, Stomach, Small Intestine (Duodenum, Jejunum & lleum) Large intestine (Casecum, Appendix, ascending colon, transverse colon, descending colon, sigmoid colon, rectum), Anal canal,Anus, Liver, Gall bladder, Bile duct, Pancreas, Spleen, Peritoneum, Mesentery and their position in the abdominal quadrants.

VIII. URINARY SYSTEM:

1. Kidneys: position, surfaces, internal structures.

2. Ureters

3. Urinary Bladder

4. Male Urethra

5. Female Urethra

IX. LYMPHATIC SYSTEM:

Description of: Lymph, Lymph glands, Lymph ducts, Thoracic
duct, and Cysterna chyli.

X. DISSECTION/DEMONSTRATION OF DISSECTED PARTS OF :

1. Upper limb

2. Thorax

3. Abdomen and Pelvis

HUMAN ANATOMY-II

(Duration of study - 18 months)

THEORY

I. OSTEOLOGY: (including Ossification and related Histology)

Description of various bones of:

(a) Lower limb

(b) Skull as a whole

(c) Individual Crania! bones of skull

II. ARTHROLOGY:

Description of various joints of:

(a) Lower limb

(b) Skull

(c) Skull & Vertebral column

III. MYOLOGY:

Description of various muscles of:

(a) Lower limb

(b) Head

(c) Neck

(Origin, Insertion, Blood Supply, Nerve supply and actions of these muscles)

IV. REPRODUCTIVE SYSTEM:

1. Male Reproductive organs:

(Scrotum, Penis, Glands, Testes, Vas deferens, Spermatic cord, Epidermis, Seminal vesicles, Ejaculatory duct, Prostate gland etc.)

2. Female Reproductive system:

(a) External genital organs:

Vulva. Clitoris, vagina.

(b) Internal genital organs:

(Uterus, Cervix, Fallopian tubes, Ovaries, Ligaments of Uterus & Ovaries) .

(c) Mammary glands

V. ENDOCRINE SYSTEM:

Description of:

(Pituitary, Pineal, Thyroid, Parathyroid, Thymus, Spleen, Pancreas, Suprarenal, Ovaries & Testes).

VI. NERVOUS SYSTEM:

Division of nervous system, central nervous system, peripheral nervous system, cerebral hemispheres, Mid brain, pons, medulla oblongata, Cerebellum, spinal cord, Autonomic nervous system.

- Meninges: Dura mater, Arachnoid mater
- C.S.F.
- Ventricular system
- Cranial nerves
- Spinal nerves
- Important plexuses: Cervical, Brachial, Lumbers Sacral Plexuses and description of their nerves.

Vll. ORGANS OF SPECIAL SENSES:

- Tongue
- Nose
- Eye ball & associated structures, Lacrimal apparatus
- Ear: Description of external ear, middle ear and internal ear.
- The integumentary system: Description of skin & itappendages.

VIII. DISSECTION / DEMONSTRATION OF DISSECTED PARTS OF:

1. Lower limb
2. Head & Neck
3. Brain & Spinal Cord
4. Organs of Special senses.
5. Cranial nerves.

PRACTICALS

I. HISTOLOGY:

1. Fresh tissue preparations and staining exercises of tissues specified under histology.
2. Demonstration of histological slides of: -
   (a) Respiratory System
   (b) Gastrointestinal system
   (c) Renal system
   (d) Reproductive system
   (e) Endocrine system

II. Demonstartion of Embryological Models and charts

For the purpose of written theory examination, the syllabus is divided as follows:

ANATOMY I:

1. Regional Anatomy, Histology, embryology, Myology, Anthrology & Osteology of:

a) Upper limb

b) Thorax

c) Abdomen & Pelvis

ANATOMY II:

1. Regional Anatomy, Histology, Embryology, Myology, Anthrology & Osteology of:

a) Lower limb

b) Head& Neck

2. Brain & Spinal cord

3. Special senses.

PHYSIOLOGY - I

(Duration of study - 18 months)

THEORY

I. GENERAL PHYSIOLOGY-

1. Cell Structure
2. Subceliular units
3. Cell membrane and its properties
4. Transport mechanisms
5. Bioelectrical potentials
6. Body fluids and homeostasis.

II. BLOOD - Physical properties, composition and functions of blood.

1. Plasma proteins
   (a) Normal values
   (b) Origin and methods of separation
2. Functions and variations in health and disease.Bone marrow
   (a) Formed elements
   (b) Composition and functions
3. Erythrocytes
   (a) Morphology and variations in health and disease.
   (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 group

(a) Classification

(b) ABO and RH system

(c) Blood transfusion, indication and hazards

12. Lymph and tissue fluids

(a) Lymph and reticular system

(b) Principles of immune system

(c) Cellular and hormonal immunity

III. CARDIOVASCULAR SYSTEM

Historical perspective, organization of cardiovascular system

1. Heart:-

(a) Structure and properties of cardiac muscle

(b) Cardio metabolism

(c) Innervations of heart, junctional tissue of heart.

(d) Regeneration and spread of cardiac impulse

2. Electrocardiography: -

(a) Enthovan's Law

(b) Various EGG leads, normal EGG and its interpretation.

(c) Cardiac Arrhythmias and heart blocks.

(d) Cardiac Vector.

3. Cardiac cycle

(a) Pressure and volume changes (mechanical events)

(b) Heart sounds and stethoscope

(c) Principles 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 principles of blood flow, regulation of blood flow.

(c) Jugular venous pulse tracing, radial pulse tracking.

(d) Coronary, cerebral, renal and pulmonary circulation.

(e) Splanchnic, cutaneous and capillary circulation.

(f) Cardiovascular changes in altitude and exercise.

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 thoraxic cage.

(c) Pressure and volume changes during respiration.

(d) Work of breathing, lung compliance and its significance in health and disease.

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 apnea, hypo apnea, dysnoea, apnea 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 functions of lungs.

(g) Artificial respiration.

V. DIGESTIVE SYSTEM

1. Introduction, organization and plan of digestive system.
2. Saliva
   (a) Composition, functions, regulation of 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 mechanics of HCL secretion.
   (d) Gastric emptying time and its regulation.
   (e) Methods of study of gastric function and its supplied 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 function.
6. Small intestine
   (a) Succusentericus.
   (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 movement and methods of study.
10. Digestion and absorption of carbohydrates, fats, proteins and vitamins, minerals and water.

VI. EXCRETORY SYSTEM

1. General introduction, organs of excretion with special emphasis on evolution of excretory mechanisms.

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 of urine.

(d) Renal function tests,

4. Non - excretory functions of kidney

(a) Physiology of micturition and its abnormalities.

5. Skin - Structure and functions..

PHYSIOLOGY-II

(Duration of study - 18 months)

THEORY

VII. ENDOCRINES

1. Introduction-hormones, evolutionary back-ground and organisation of endocrine control systems.

2. Methods of study

(a) Classification of hormones and mechanism of hormone action.

(b) Regulation of hormone secretion and feed-back system.

3. Hypothalmo-hypophyseal system

Releasing hormones.

4. Active principles

(a) Chemical nature, biosynthesis, role of action.

(b) Control of secretion, excretion and its applied aspect.

(c) Clinical study of their hypo - and hyper function.

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

VIII. REPRODUCTIVE SYSTEM

01. Physiology of reproduction

(a) Introduction to physiology of reproduction.

(b) Sex determination and sex differentiation and chromosomal study.

02. 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.

03. Female reproductive system

(a) Ovary, gonadotropins.

(b) Structure of ovary, and corpus lueteum.

(c) Functions of ovary, ovarian hormones.

(d) Physiology of menstruation cycle and physiology of pregnancy.

(e) Physiology of placenta, gestation and parturition.

(f) Physiological basis of tests for ovulation and pregnancy.

04. Physiology of lactation.

IX. NERVE MUSCLE PHYSIOLOGY

1. Neuron

(a) Morphology and measures of excitability.

(b) Classification and properties of nerve fibers.

2. Muscle

(a) Types of muscle and their properties and morphology

(b) Neuro-muscular junction, exitation-contraction coupling.

(c) Clinical study of their hypo - and hyperfunction.

(d) Myasthenia gravis.

(e) Starling's taw its applications.

X. CENTRAL NERVOUS SYSTEM

1. Structural and functional organization of central nervous system.
2. Neuron Neurogilia , functional types of neurons.
3. Cerebro-spinal fluid

(a) Formation, circulation, functions of CSF.

(b) Methods of collection of 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 an general properties of receptors

(b) Sensory modalities and stereognosis.

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. Organisation of motor system

(a) Pyramidal and extra-pyramidal systems

(b) Upper and lower motor neurones and their lesions.

(c) Brown sequard syndrome.

(d) Syringomyelis.

9. Cerebellum

(a) Functional anatomy, connections and functions.

(b) Effects of lesions and tests for cerebellar function.

10. Basal ganglion

(a) Functional anatomy, connections and functions.

(b) Diseases of basal ganglion and its clinical evaluation.

11. Vestibular apparatus

(a) Functional 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 hypothalamus.

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, connections and functions.

17. Reticular formation

(a) Physiology of reticular formation.

(b) EEC, physiology of sleep and wakefulness.

1. Higher functions

(a) Learning, speech, memory, behavior and emotions.

XI. AUTONOMIC NERVOUS SYSTEM

1. Sympathetic nervous system.

2. Parasympathetic nervous system.

XII. SPECIAL SENSES

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 inner-ocular muscles.

(b) Errors of refraction and its correction, visual acuity.

(c) Physiology of aqueous humor.

(d) Cornea, lens, intraoccular pressure, accommodation.

(e) Retina, rhodospin cycle, dark and light adaptation.

(f) Visual pathways and effects of lesions in visual pathways

(g) Field of vision, perimetry, binocular vision

(h) Iris and pupillary reflexes.

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

(j) Formation and circulation of tears, lacrimal glands.

04. Hearing

(a) Functional anatomy of ear, function of external ear,

(b) Physiological functions of middle ear.

(c) Impedence matching and tympanic reflex.

(d) Functional anatomy of internal ear, cochles, organ of cort.

(e) Auditory pathways and auditory cortex.

(f) Frequency analysis, sound localisation, defects of hearing.

(g) Audiometry, tests for conduction defects, Aphasia.

Note: For the purpose of written theory examination, the syllabus is divided as follows: -

Theory paper-1

Consisting of chapters on general physiology, blood, cardiovascular system, respiratory system and digestive system and excretory system.

Theory paper-II

Consisting of chapters on Endocrine system, reproductive system (male and female), nerve muscle physiology, central nervous system, autonomic nervous system and special senses.

PRACTICAL

SECTION-C

PART-I

I. Hematology experiments: -

01. Collection of blood, study of fresh drop of blood, effects of isotonic, hypertonic and hypotonic saline on RBC's

02. Enumeration of RBC's (RBC count.)

03. Estimation of hemoglobin

04. Packed cell volume (PCV) and blood indices.

05. Determination of Erythrocyte sedimentation rate (ESR)

06. Enumeration of WBC {Total count)

07. Differential WBC count (Differential count)

08. Determination of blood groups (ABO system)

09. Determination of clotting time and bleeding time.

10. Enumeration of platelets (Platelet count)

II. Human Physiology Experiments

01. Recording of blood pressure in human beings and study of effects of exercise on blood pressure.

02. Electrocardiography (Demonstration)

03. Clinical examination of CVS and radial pulse.

04. Determination of tidal volume, inspiratory reserve volume, expiratory reserve volume, inspiratory capacity, expiratory capacity, vital capacity and forced expiratory volume.

(All experiments are to be arranged for demonstration)

05. Stethoscope, normal body temperature and its physiological variation.

06. Pulse, respiration and temperature chart with correlation.

07. Clinical examination of respiratory system.

08. Plethysmography,

09. 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.

PART - II

(Only demonstration to students)

I. AMPHIBIAN EXPERIMENTS (MUSCLE): -

01. Staff of commonly used apparatus in experimental physiology for muscle experiments.

02. Gastronemius-Solatio preparation of frog.

03. Recording simple muscle twich from G.S. preparation of frog.

04. Effects of successive stimuli on G.S. preparation of frog.

11. AMPHIBIAN EXPERIMENTS (HEART)

01. Recording a cardiogram.

02. Effect of warmth and cold on sinus venosus of frog's heart.

03. Effects of 1st and llnd stannius ligature on frog's heart.

04. Effect of cat-ions Na, K and chloride.

RECOMMENDED TEXT BOOKS FOR PHYSIOLOGY

01. Text book of medical physiology- by A.C. Guyton

02. Review of Medical Physiology- by W.F. Gamong.

03. Concise text book of medical physiology - Choudhary.

04. Text book of physiology - by C.S. Chatterjee.

REFERENCE BOOKS

01. Best and Taylor's physiological basis of Medical practice.

02. Practical physiology -by Ghaj

03. Practical physiology - by Ranade.

PHILOSOPHY OF NATURE CURE - PAPER -I

(Duration of study 18 months)

1. (a) What is Nature cure
   (b) Definitions of Nature Cure and History of Naturopathy
2. Three fold constitution of man
3. Two fold attitude of mind and soul
4. Symphony of life
5. Basic Principles of Nature Cure
6. Laws of Nature
7. Violations of Nature
8. Catechism of Nature Cure
   (a) Constructive Principle
   (b) Destructive Principle
   (c) Health
   (d) Disease
   (e) Acute disease
   (f) Chronic disease
   (g) Healing crisis
   (h) Disease crisis
   (i) Cure
   (j) Normal/Natural
9. Philosophy and History of Indian Naturopaths
   (a) Mahatma Gandhiji
   (b) Vinoba Bhave
   (c) Krishnam Raju
   (d) Laxman Sharma
   (e) B.VenkatRao
   (f) Vitlaldas Modi
   (g) Acharya Pacha Venkatrammaiah
   (h) S.J.Singh
   (i) Kulranjan Mukherjee
   (j) Dinshamehta
10. Philosophy and History of Foreign Naturopaths

(a) Hippocrates

(b) Vincent Priesnitz

(c) Sebastian Kneipp

(d) Louish Kunhe

(e) Henry Lindlhar

(f) Herbert Shelton

(g) J.H.Kellog

(h) Adolfjust

(i) Sigmund Freud

(j) Arnold Riokli

(k) JohnllTilden

(I) The School of Salerno

(m) Aesculpins

(n) Bernard Macfeddon

(o) Bernard Jenson

(p) Arnold Ehret

(q) Paracelsus

(r) Ignatzvan peczely

(s) F.W.Collins

(t) R.M.Mclain

11. Primary causes of disease and its manifestations:

12. Unity of disease and Unity of cure.

13 (. a) Inflammation and its different stages

(b) Suppression during the different stages of inflammation.

14. Nature cure in relation with pancha maha bhutas

15. Healing from within

16. Differences between functional and organic diseases

17. Conservation of Vitality.

18. How to acquire natural immunity

19. Ways to pray

PHILOSOPHY OF NATURE CURE - PAPER - II

(Duration of Study 18 Months)

1. Arogya Raksha Panchatantras and their importance in prevention of disease and maintaining good health.
2. Properties of Water, Mud, Air, Sunlight.
3. Health is positive and Disease is Negative.
4. Importance of physical and mental hygiene.
5. Scientific relaxation and normal suggestion.
6. Toxins and anti toxins in Nature cure way.
7. Vaccination & their effects on human body and mind
8. Old age problems and natural rejuvenations.
9. Family planning by natural therapeutics.
10. Role of diet and yoga in nature cure.
11. Nature cure Vs. Modern medicine.
12. An introduction to Nature cure diagnostic methods
    (a) Facial diagnosis
    (b) Iridiagnosis
    (c) Spinal analysis
    (d) Chromo diagnosis.
13. Outlines on a) Regular habits for health b) Rest and Relaxation c) Live food - Nature diet (Satvic, Tamasic, Rajasik) d) Fasting e) Exercises.
14. Basic concepts in Nutrition and balanced diet.
15. **Outlines on** :-
    (a) Enema
    (b) Hip Bath
    (c) Spinal bath
    (d) Steam bath
    (e) Foot bath
    (f) Mud Pack
    (g) Water drinking
    (h) Fomentation
    (I) Infra Red Rays.
16. Fundamentals of Ayurveda

(a) Introduction to Ayurveda

(b) Origin and History of Ayurveda

(c) important works on Ayurveda

(d) Astanga of Ayurveda

(e) Panchabhoota Siddantha

(f) Shareera Vignana

Sapta Dhatus, Tridosa Vignana, Mala Vignana, Ojas,

Types of Agnis

(g) Prakriti Vignana

Classification of individuals into seven categories,

(h) Swastha Vrittam

Dinacharya, Rastricharya, Ritucharya, Vegadharanam,

Sadvritta

(i) Asta Vida ahara sevana

(j) Outlines on Roga Vignana

(k) Outlines on Chikitsa Siddantha

(I) Pathya Apathyavichara

(m) Outlines on Dravyas - Rasa.Guna, Veerya, Vipaka, Prabhava etc.

(n) Shareera Dharma

17. Fundamentals of Siddha

(a) History of Siddha

(b) Basic Principles of Siddha

(c) Methods of treatment in Siddha practice

18. Fundamentals of Homoeopathy

(a) Introduction

(b) History

(c) Basic Principles

(d) Preparation of Homeo medicines

(e) Mother Tincture, Trituration, Potency

(f) Dosage and frequency

(g) Remedies for day to day illness.

19. Fundamentals of Unani

(a) Introduction

(b) History

(c) Basic Principles

(d) Treatment mehtods.

20. Fundamental of Allopathy

(a) Introduction

(b) History

(c) Principles

PRACTICALS: -

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

II. Students should have knowledge of giving various treatments.

III. Demonstration of:

(a) Live Food (Natural Diet /Raw diet).

(b) Sathvic & boiled diet.

c) Ways of serving, various special diets.

(d) Salad Preparation

IV. Practicals with record.

V. Visiting to various Nature cure Clinics/hospitals.

TEXT BOOKS:-

1. Philosophy of Nature cure - By Henry Lindlahr
2. Practice of Nature Cure - By Henry Lindlahr
3. Human Culture and Cure -By Dr. E.D.Babbit
4. Practical Nature Cure -By Dr. K. Laxman sharma
5. History and Philosophy of Nature Cure - By S.J.Singh
6. My Nature Cure -By M.K.Gandhi
7. Natural health care - A to Z -By Belinda Gran
8. Introduction to Natural Hygiene - Herbert M. Shelton
9. Panchatantra - By Dr. Venkat Rao
10. The Science of facial expression -By Louis kuhne

REFERENCE BOOKs: -

1. My Nature cure or practical Naturopathy SJ SINGH
2. The story of my experiment with truth M.GANDHI
3. Ayurvedic for health and long life DR RK GARDE

5. Everybody's guide to Nature cure By Harry Benjamin
6. Prayer By M.K. Gandhi
7. Diet and Diet Reforms By M.K. Gandhi
8. Nature Cure J.M. Jussawalla
9. Healing from within
10. Swarthavritta vijyana R.H Singh
11. Fundamentals of Ayurveda –K.N Udupa
12. Ramnarayana vaidya - Arogya Prakash
13.Chikitsa tattwa dipika- Vaidya Mahabir prasad pandy
14. Homeopathy-The complete handbook Dr KDS Dhama

B.N.Y.S. IInd YEAR (DURATION – 12 MONTHS)

SL.NO.	SUBJECT	DURATION OF STUDY
1.	Pathology –I	12 months
2.	Pathology- II	12 months
3.	Microbiology	12 months
4.	Yoga and Physical Culture-1	12 months
5.	Diagnostic Methods in Naturopathy	12 months
6.	Modern Diagnostic Methods	12 months
7.	Basic Pharmacology	12 months

PRACTICALS : Pathology, Microbiology, Yoga & phy.culture, Diagonostic Methods in N&Y, Modern Diagnostics.

PATHOLOGY-I

(Duration of study - 12 months)

THEORY

I. 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 functions
   (b) Causes and nature of cell injury
   (c) Toxic substances, physical agents and lack of nutrients.
   (d) Infectious agents & Parasites.
   (e) Immune mechanisms and genetic defects.
3. Reactions of cell to injurious agents
   (a) Lethal injury-necrosis and gangrene
   (b) Sub lethal injury -

(i) Cloudy swelling
(ii) Fatty changes in liver, heart and kidney.
(iii) Glycogen infiltration and hyaline degeneration.
(iv) Lipoid degeneration Goucher's disease.
(v) Mucoid degeneration.

   (c) Excessive or abnormal accumulations: -

(i) Amyloid

   (d) Pathological calcification
4. Inflammation and repair: -
   (a) Definition, classification and nomenclature.
   (b) Acute inflammation

Vascular and cellular phenomenon, cells of exudates chemical mediators and tissue change in acute inflammation cardinal signs of acute inflammation.

Fate, 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) Restitution, regeneration and repair.

(b) Repair or epithelial and mesenchymal tissue.

(c) Primary union and secondary union.

(d) Mechanism involved and factors modifying repair process.

6-A.Gangrene:- Causes, Dry Gangrenes, moist gangrene, gas gangrene.

7. 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, congential syphilis.

(f) Aotinomycosis, maduramycosis and rhinosporidiosis.

8. Fluid and Memo Dynamics changes (circulatory disturbances)

(a) Hyperemia, congential and hemorrhage.

(b) Thrombosis, embolism, DIG

(c) Ischemia, Infarction and shock.

9. immune pathology: -

(a) Basic pathological mechanism in autooimmune disorders.

(b) Concepts of immunodeficiency disorders.

(c) Pathology of AIDS.

10. Growth and its disorders:-

(a) Definition of agenesis, aplaisa, atrophy, hyperplasia, hypertrophy, hypoplasia, metaplasia.

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

11. Neoplasia:-

(a) Definition, classification and nomenclature.

(b) Characteristic features of benign and malignant tumors

(c) Route of spread of malignant tumors.

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

(e) Carcinogenesis and carcinogens.

(f) Effect of tumor on host, and effect of host on tumors.

(g) Laboratory diagnosis of cancer - Biopsy, exfoliative cytology, and prognostic prediction in cancer.

(h) Description of common tumors like Fibroma, Lymphoma, Lipoma, Angioma, Liomyoma and Fibrosarooma, Lymphosarooma, Liposarooma, Angiosarcoma and Leiomyosarooma.

(i) Embryonal tumors like teratoma and retinobiastoma.

12. Mineral and pigment metabolism: -

(a) Pathology of melanin pigment.

(b) Pathology of hemoglobin and its derivatives.

(c) Hemosiderosis and hemochromatosis.

13. Genetic disorders:-

(a) Klinefelter's syndrome, turner's syndrome, Down's syndrome.

PATHOLOGY-II

(Duration -12 Months)

THEORY

II. Systemic Pathology -

1. Disorders of RBCs

(a) Definition, morphologic and Etio-pathologic classification of anemias.

(b) Iron deficiency anemia, B12 and folate deficiency anemia,

(c) Concept and classification of hemolytic anemias.

(d) Polycythemia.

(e) Laboratory investigations in anemia.

2. Disorders of WBC:-

(a) Leukopenia, Leukocytosis.

(b) Leukaemia, Agranulocytosis and Tropical eosinophilia.

3. Coagulation and Bleeding disorders: -

(a) Structure, function and pathology of platelets.

(b) Definition and classification of blood dyscrasias.

(c) Laboratory investigation in bleeding disorders.

4. Diseases of Cardiovascular system -

(a) Arteriosclerosis and Atherosclerosis.

(b) Aneurysm.

(c) Vasculitis and thromboangitis obliterans.

(d) Rheumatic heart disease, endocarditis, myocardial infarction.

(e) Congenital heart diseases, pericarditis.

(f) Congestive cardiac failure.

5. Diseases of respiratory system: -

(a) Lobar pneumonia, bronchopneumonia, pulmonary tuberculosis,

(b) Atelectasis, bronchiectasis and pneumoconiosis

(c) Chronic - obstructive pulmonery disease (COPD)

(d) Bronchial asthma, chronic bronchitis.

(e) Acute respiratory distress syndrome (ARDS)

(f) Tumors of lung and pleura.

6. Diseases of Gastro-intestinal system: -

(a) Pleomorphic adenoma of salivary gland.

(b) Barret's esophagus.

(c) Gastritis and peptic ulcer and tumors of stomach.

(d) Inflamatory bowel diseases - crohn's disease ulcerative colitis, typhoid ulcer, tumors of small intestine.

(e) Megacolon and tumors of colon.

(f) Malabsorption syndrome, tropical sprue and eoeliac disease.

(g) Amoebiasis, bacillary - dysentery and intestinal tuberculosis.

7. Disease of liver, biliary tract and pancreas.

(a) Liver function tests and hepatic failure, viral hepatitis.

(b) Cirrhosis of liver, tumors of liver.

(c) Cholecystitis, gall stones.

(d) Acute pancreatitis, diabetes mellitus.

(e) Cystic fibrosis (mucoviscidosis)

(f) Liver abscess and alcoholic liver.

(g) Indian childhood cirrhosis.

8. Diseases 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) Urolithiasis, tumors of kidney and pelvis.

9. Diseases of Male Genital system: -

(a) Orchitis and testicular tumors,

(b) Nodular hyperplasia of prostate, carcinoma of prostate.

(c) Carcinoma of penis and lesions of penis.

10. Disease of Male genital system -

(a) Endometrial hyperplasia, adenomyosis and endometriosis,

(b) Carcinoma of certix, tumors of ovary.

(c) Pelvic inflammatory diseases.

(d) Carcinoma and other diseases of vulva.

11. Disease of Breast:-

(a) Fibrocystic disease and tumors of breast

(b) Gynaecomastia.

12. Endocrine pathology: -

(a) Pituitiary, aoromogaly, hyopothyroidism, & Grave's disease.

(b) Thyroiditis, tumors of thyroid and thyroid function test.

(c) Hypoparathyroidism and hyperparathyroidism

(d) Hyperplaisa and adenoma of parathyroid.

(e) Adrenal gland, addison's disease, cushing's syndrome.

(f) Pheochromocytoma, neuroblastoma.

13. Musculo-skeletal pathology: -

(a) Osteomyelitis and Osteoporosis.Poliomyelitis,

(b) Rickets and Osteomalacia.

(c) Osteitis fibrosa cystica and paget's disease, fibrous dyspiasia.

(d) Tumors of bone.

(e) Rheumatoid arthritis, Gout.OA.Classification of Arthritisall types.

(f) Myasthenia gravis and progressive muscular dystrophy.

14. Diseases of Nervous system: -

(a) Menengitis, Tumors of CNS.

(b) Tumors of peripheral nerves.

(c) Encephalitis.

Peripheral neuritis,

Parkinsonism

Alzhemiers disease

Foot drop

15. Diseases of Lymph nodes and spleen -

(a) Lymphadenopathy.

(b) Malignant Lymphomas and spleenomegaly

16. Pathology of Skin: -

(a) Squamous cell carcinoma, basal cell carcinoma.

(b) Malignant melanoma.

(c) Warts, molluscum contagiosum.

(d) Superficial and deep fungal diseases.

Acne

Psoriasis

Dermatitia-all types

Eczemas-all types

III. Clinical Pathology Including clinical Hematology -

1. Sample collections for various hematologic and clinical pathologic investigations and anti - coagulants used.

2. Theoretical aspects of HB estimation, hematoorit, 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. Urinalysis and microscopy.

7. Liver function tests.

8. Renal function tests.

9. Glucose tolerance test.

10. Exfoliative cytology.

PRACTICAL

I. **Hematology: -**

1. Blood groups (ABO system)
2. Estimation of hemoglobin
3. Enumeration of RBC's (R B C Court)
4. Total leucocyte count (Total count)
5. Differential leucocyte count (D C)
6. Peripheral sear staining and reporting.
7. Absolute eosinophil count
8. Demonstration of: -
   (a) Hemograms in anemia -
      (i) Iron deficiency anemia
      (ii) Macrocytic anemia
      (iii) Macrocytic anemia
      (iv) Hemolytic anemia
   (b) Hemograms in Leukaemias -
      (i) Acute types
      (ii) Chronic types
9. Slide Study of: -
   (a) Acute myeloid leukaemia
   (b) Chronic myeoloid leukaemia
   (c) Chronic lymphatic leukaemia

II. Clinical pathology: -

1. Urine analysis.
2. Semen analysis.
3. Pregnancy tests.
4. Liver function tests.
5. Fractional test meal.
6. Glucose tolerance test
7. CSF analysis

Recommended Text Books for Pathology: -

1. Pathological basis of disease - By Robbins, Cotran and Kumar

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

Reference Books: -

1. Text book of Pathology - By Anderson
2. Systemic pathology - By Symmers
3. Medical Laboratory Technology – ByRamnikSood

MICROBIOLOGY

(Duration of study -12 Months)

THEORY

(1) General Bacteriology: -

(a) Historical Introduction

(b) Morphology and Physiology of Bacteria.

(c) Sterilization and Disinfections.

(d) Cultivation of Bacteria.

(e) Bacterial Growth and Multiplication.

(f) Basic principles of Bacterial genetics.

(2) Immunology:-

(a) Infection and Immunity

(b) Immunoglobulins and Immune response.

(c) Immune system and antigen-antibody response.

(d) Compliment and other serological tests.

(e) Hypersensitivity

(f) Basic principles of auto-immunity

(g) immuno Deficiency disease.

(3) Systemic Bacteriology: -

(a) Streptococcus, Straphylococcus and pheumococcus, gonococcus, Meningococcus, corynaebacterium, clostridium, Hemophilus, Bordetella, Mycobacterium, spirochaete, Yersinia, Chalamydia, Tetanus, salmonella type,paratyph

(b) Neisseria, Bacillus, Enterobacteriacae I and II, Coliform proteos, shigella, salmonella, vibrio, Brucella, Tuberculosis, Mycoplasma, ricketsiaceae.

(4) Parasitology: -

1. Helminthology - Enterobicus, vermicularis
2. Stool Examination for Parasites.
3. Blood examination for parasites.

(a) Protozoalogy-

Entamoeba and Plasmodium

(b) Helminthiology-

Ankylostoma, Ascariasis, Taenia, Wucheria

(5) Virology: -

(a) General properties of virus and their diagnosis.

(b) Herpes, Adenovirus, Picorna, Hepatitis Virus.

(c) Poxvirus, Rabies Virus, Poliovirus, HIV, Bacterophage.

(d) Measles, Small pox, Chicken pox, mumps.

(6) Myoology:-

(a) General characters and methods used for study and diagnosis of fungal infections.

(b) Superficial mycoses, Systemic Mycoses, Candidiasis, Aspergillosis, Rhinosperidiosis.

(7) Applied Microbiology >

(a) Normal bacterial flora of human body.

(b) Diagnostic methods in common diseases -

(i) Meningitis, UTI, PUO, Gastroenteritis, Respiratory Infection

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

(c) Bacteriology of Water, Milk and Air

PRACTICALS: -

Demonstration of culture media demonstration of sterilization Techniques Systemic-Identification of the pathogen from the give clinical material based on staining, property, cultural characters, biochemical and serological tests. Immunology - interpretation of the given immunologial test. Agglutination - slide, tube and passing agglutination precipitation -VDLR

Elisa

Parasitology - stool examination for ova and cyst saline and iodine preparation direct and concentration techniques. Blood smear for malarial parasite microfilaria and others parasites identification and Interpretation of the parasites (Adult

and Larva for Ms)

Text Books: -

1) Text Book of Microbiology - By R. Anantha Narayana & C.K. JayaramPaniker

2) Parasitology - By Jayaram Paniker

3) Bacteriology - By Dey

4) Text Book of Microbiology - By Chakravarthy

Reference Books: -

1) Parasitology

2) Practical Microbiology

3) Clinical Microbiology

4) Medical Laboratory- Manual

for Tropical Countries

By Chatarjee

By R. Cruick Shank

By Bailey & Scott

By Monica

Cheesbrough

YOGA & PHYSICAL CULTURE -1

{Duration of study-2 terms of second B.N.Y.S. - 12 Months)

PART -I

1. Rules and regulations for the practice of all Yogic techniques- Asanas, Pranayamas, Mudras,Bandhas,Kriyas.

2. Differences between Yogic and physical Exercises

3. Physiological effects of various asanas, on different systems of the body such as Skeletal, Respiratory, Muscular, Cardiovascular ,etc. In general {both long term and short term effects) may be studied. The effect of abrupt discontinuation of the practices may also be studied.

4. Research on Physiological aspects of Yogasanas, Pranayama, Meditation, Concentration, Relaxation techniques, Kriyas, etc. and other Yogic techniques done by the Kaivalyadhama school from the 1920's till date. Other research work published in indexed journals should also be studied.

5. Surya namaskar and its importance in health and diseased conditions.

6. Mudras & Bandhas - their neuro-muscular & glandular effects on the body.

7. Theory of Pranayamas: Types of Prana & their functions.

Nadi:- Ida, Pingala, Sushumna and Upanadis.

All Types of Pranayamas: Suryabjeda, Ujjayi, Sheetkari, Sitali, Bhastrika, Bhramari, Moorcha and Plavini etc.— Physiological and Psychological effects of Pranayamas.

8. Physiological and spiritual importance of shatkriya practice.

9. Physiological effects of Shanka Prakshalana

10. Importance of Pratyaharas.

11. Techniques of Dharana.

12. Psycho-physiological effects of meditation.

(a) Religious methods (Saguna and Nirguna methods)

(b) Zen meditation

(c) Gurujapa

(d) Transcendental meditation

(e) Preksha meditation

(f) Om meditation

(g) Brahma Kumari's meditation

(h) Vipassana Meditation. And also other types of Meditations.

13. KUNDALINIYOGA

Kundatini -the basis of Yoga.

Science and Kundalini.

Different Chakras, its seat, its qualities and method to awaken different chakras.

Physiology and Psychology of Kundalini yoga.

Misunderstanding about Kundalini and sex. Symptoms of Kundalini. Kundalini Chakras-Innate Lifestyle Governors of specific personality patterns. Symptoms & Signs of Kundalini awakening phenomenon.

Part-II :-

1. Yoga for personality development.
2. Yoga and Education
3. Yoga for women. Emphasis on Yogic practices during pregnancy.
4. Yoga for the elderly.
5. Role of Yoga in the education of gifted children.
6. Yoga for Children.
7. Misconceptions of Yoga.
8. Yoga teaching methods.
9. Yogic training and physical fitness.
10. Psychology of Yoga in comparison to modern psychology
11. Yoga Philosophy and Sadhana.
12. Science of Yoga as a holistic system in comparison to modern medicine,Naturopathy, Ayurveda, Homeopathy, Unaniand Siddha.
13. Yoga and Stress Management.
14. Macro & Micro concepts of Panchamahabootas.
15. Yoga and Consciousness
16. Yoga and Science
17. Yoga & Religion.
18 **ASANAS:** Procedure, Indications, Cl and Caution For all I BNYS Asanas, also Eka pada pranamasan, Natavarasana, Sirasana, Mayurasana.

19 **PRANAYAMAS**: Procedure, Indications, Cl, and Caution for
Sheetali, Sheetkari, Bhramari Bhastrika, Kapalapati, &Surya Bed Pranayama

20 **BANDHA**: Introduction, Bandas&granthis Procedure, Indications, Cl, and Caution for Jalandra, Moola.and Maha Bandha

21. **MUDRA**: Indroduction, Mudra &Prana, Scientific look at Mudras, Five groups of Mudras in detail. All the 25 Mudras. Procedure, Indication, Cl, and caution for all mudras. Practicals on 18,19,20 & 21

REFERENCE BOOKS :-

1. An autobiography of a Yogi - by Paramahamsa Yogananda
2. Yoga as philosophy & religion - by S.N. Dasgupta
3. Yoga - The science of holistic living - V.K, Yoga
4. New Perspectives in stress management - Swami Vishnu
5. A complete illustrated book of Yoga - Swami Vishnu devananda
6. Encyclopedia of Indian Physical culture - by D.C. Mujumdar
7. Preksha Meditation - by Acharya Tulsi
8. Light on Yoga - by B.K.S. lyengar
9. Lighten Pranayama
10. Kundalini-by Gopi Krishna
11. Kundalini and meditation - by Arjundas Malik
12. Meditation and mantras - by Swami Vishnu Devananda
13. The Serpent power - by John Woodroff
14. Meditation from the Tantras - by Swami NishalanandaSaraswati.
15. Meditation according to Vedanta - by SwamiSiddeshwarananda
16. Yoga mimansa - by Lonavala publications
17. The Twelve Principle Upanishads - By Dr. E. Roer, R.L. Mitra, E.B. Cowell
18. The message of the Upanishads - Swami Ranganathananda
19. Vivekacudamani - Shri Chandrashekhara Bharati Swamiji (Bharatiya Vidya Bhawan Publications)
20. All the Publications of BSY, Munger, Bihar.

DIAGNOSTIC METHODS IN NATUROPATHY

(Duration of study - 12 Months)

THEORY

1. Introduction to the science of facial expression.
   (a) Historical highlights.
   (b) Definition and scope of the science of facial expression.
2. Character of the Healthy Body: -
   (a) Normal functions.
   (b) Normal figure.
3. Foreign matter theory: -
   (a) Definition of foreign matter.
   (b) The process of accumulation of foreign matter in the body.
   (c) Encumbrance.
   (d) Change • 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 habit: s jpports the accumulation of foreign matter in the body - tobacco, alcoholic drinks, coffee, tea, opium, etc. Drug Jditions - Pethedine, heroin, injection etc.. Suppress vi of diseases v/s elimination of morbid and diseased erms from the system.
6. Types of encumberance - Front encumbrance, right – side encumberance front and right - side encumberance, left side encumberance and mixed or whole encumbrance, theirdescription, general characters and possible diseases in the concerned encumberance 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 & the techniques of correction.

***IRIDIAGNOSIS*: -**

1. Introduction of Iridology

(a) Definition of Iridology

(b) Historical highlights.

(c) Comparison of other systems (Allopathy) Homeopathy,Ayurveda, Unani (etc.,) Diagnostic methods.

(d) Anatomy of the Iris.

(e) Theory in application.

(f) The theory of healing crisis.

(g) A uniform division and classification of diseases.

(h). Philosophical phase

(i). Theoretical phase

2. Instructions in methods of application: -

I. A. Technique in iris reading

B. The normal and abnormal Iris, color of the Iris.

II. Study of density of the Iris

III. Key to Iridology

A. Iris charts brought up to date.

B. Zone areas

C. Sectional Division

3. Comparison of fermentation & inflammation

4. Interpretations of Iris manifestations

I. A. Types of inflammation

B. Inherent lesions and weaknesses.

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 scurf rim

I. The radii-Solaris

J. Tumours

K. The sodium ring

L. Anemia in the extremities and in the brain

M. Drugs and chemicals appearance in the Iris and their Poisonous effects in the body - Arsenic, Bismuth,Bromides, Coaltar products, Ergot, Glycerin, Iodine,Iron, Lead, Mercury, Opium, Phosphorous, Quinine, Salicylic acid, Sodium, Strychnine, Sulphur,Turpentine, Vaccines etc.

II. The iris reveals the cause of disease.

5. Case histories according to Iridology

Vabhi Chakra yoga and Swara Vigyan Nadi Vignanam

6. Advance research in Iridology

a. Reflex areas and remote symptoms

b. Stomach and intestinal disorders, the principal causes, principle disorders - remedial measures.

PRACTICALS:

Clinical classes and demonstrations in the nature cure Hospital. Case studies 25 with record. Demonstrating the Equipments.

RECOMMENDED TEXT BOOKS:

1. Science of Facial Expressions - By Louis Kuhne
2. The new science of healing - By Louis Kuhne
3. The science and practice of Iridoiogy - By Bernard Jensen
4. Iridiagnosis and Other Diagnostic - By Henry Lindlahr

Methods.

REFERENCE BOOKS:

1. Iridology: A guide to Iris analysis and preventive Health Care-By Adam J Jackson
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 Davidson Farida.
4. Iridology: Alternative Health Series - Adam J. Jackson
5. Vision of Health: Understanding Iridology - By Jenson, Bernard and Booden, Donald
6. Eyes Talk: Through Iridology Better Health-By Vriend John
7.Yogic Sukshma Vyayama : Swami Dhirendra Brahmchari .

MODERN DIAGNOSTIC METHODS

(Duration of study -12 Months)

THEORY

Clinical Diagnosis :-

I. Examination of the Patient: -

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) Locomotors 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 counts.
   (ii) Erythrocyte sedimentation rate (E.S.R.), Hb estimation.
   (iii) Blood sugar, Blood Urea, serum uric acid, serumcholesterol, serum lipid profile, serum creatinine.

2. Radiological Investigation: -
   (a) Plain X- Ray- chest
   (b) K.U.B.
   (c) Lumbar and cervical spine.
   (d) Skull and paranasal sinuses
   (e) Joints
3. Contrast Radiology: -
   (a) Barium Swallow, barium meal and barium enema.
   (b) Cholecystography
   (c) Pyelography
   (d) Angiography
   (e) Brochogram
4. Electrocardiography
5. Echo - cardiograph
6. Coronary angiography's
7. Electro - encephalography
8. Bio-chemical investigations: -
   (a) Liver function tests
   (b) Creatinine clearance test
   (c) Vanillo-mandelic acid (VMA) excretion test in urine
   (d) SCOT and SGPT
   (e) LDH
   (f) CPK
9. Diagnostic Paracentesis.
10. Diagnostic Thoracocentesis
11. Lumbar puncture and CSF analysis
12. Radioactive iodine up-take studies.
13. Thyroid T3, T4, TSH estimation
14. Diagnostic skin tests.
15. Endoscopic procedures.
16. Ultra-sonography
17. Computerized topographic scan (CTscan)
18. MRI
19. PET

20. Doppler study

III. Final Diagnosis :-

Text Books:

1. Hutchinson's clinical methods
2. Manual of clinical methods - P.S. Shankar
3. Clinical diagnosis Jal Vakil
4. Clinical Methods Chamberlin
5. Physical diagnosis Gollwalla
6. Morrisons principles of internal medicine

PRACT1CALS:

1. History taking and physical examination of cases.
2. Case sheet writing of different types of cases (25)
3. Demonstration of equipments and instruments used forinvestigation in modern diagnostics.
4. Demonstration tour of an intra modern super-specialty hospital to view the latest technique of modern diagnosis.

BASIC PHARMACOLOGY

(Duration of study-12 Months)

I. **GENERAL PHARMACOLOGY:**

1. The Nature and Sources of drugs
2. Routes of drug administration
3. Absorption and bioavailability of a drug:
   . Factors affecting drug absorption & its bioavailability
4. Distribution of a drug in the body:
   - Plasma concentration
   - Drug Storage
   - Placental transfer
5. Fate of the drug
6. Drug excretion
7. Drug receptors
8. Mechanism of action of a drug.
   - Types of drug action
9. Adverse reaction to drug.
10. Drug Toxicity in Man:
    - Drug Intolerance
    - Haemopoletic toxicity
    - Hepatotoxicity
    - Nephrotoxicity
    - Abnormalities of taste & smell
    - Behavioral toxicity
    - Production of a disease.
    - Electrolyte disturbances
    - Endocrine disturbances
    - Skin toxicity
    - Carchinogenesis
    - Teratogenicity
    - Drug dependence
11. Treatment of acute drug poisoning.
12. Factors modifying the effects of a drug.

13. Role of Placebo.

14. Drug Interactions.

II. BRIEF DESCRIPTION OF THE FOLLOWING DRUGS:

(Their mode of action, dosage, adverse reaction, the method of tapering their dosage, including the adverse effects with the abrupt stoppage of their use)

1. Drugs acting on the C.N.S.:

- General sedatives, Hypnotics.
- Anaesthetics, Barbiturates, alcohols
- Anticonvulsant drugs.
- Opiod & Non-Opiod analgesics
- Analgesics, Antipyretics & Non Steroidal Antiinflammatory drugs (NSAID)
- CMS stimulants - Xanthine alkaloids (caffeine)
- Stimulants of the spinal cord - Strychnine

Psychopharmacology:

- Anti-anxiety drugs - Meprobamate, Benzodiazepines, Chlormethiazole.
- Anti-depressant drugs - Classification, actions, adverse reaction (Monoamine oxidase inhibitors, Tricyclic compounds, Carbamazepine, Lithium)
- Drug induced psychatric syndromes.
- Psychotogenic drugs - LSD, Mesca'ine, cannabis

2. Local Anesthetics - adverse reactions

3. Drugs action on ANS:

(a) Adrenergic drugs:

Catecholamines, Isoprenalline. Noncatecholamines - Ephedrine, Amphatamine etc.

(b) Adrenergic Blocking Agents - Alpha receptor blocking agents, Beta blockers

(c) Cholinergic Blocking drugs - Belladonna alkaloids (Atropine)

(d) Skeleton Muscle relaxants - Diazepam, Baclofen, Dantrolene .

(e) Anti-Parkinsonian drugs - Levodopa, Amantadine.

4. Biogenic Amines & Polypeptides:

- Histamine & Antihistamine drugs
- Angiotensin, Kinins, Leukotriences, Cytokines & Prostaglandins

5. Drugs used in Respiratory disorders:

(a) Expectorants, Central cough suppressants,
Antitussives, mucolytic agents.

(b) Pharmacotherapy of Bronchial Asthma & Rhinitis:

- Drug therapy during an acute attack
- Prevention of acute attacks
- Treatment of Status Ashtmaticus
- Treatment of Acute Respiratory failure
- Treatment of Chronic Persistent Asthma
- Drug therapy of Rhinitis.

6. Cardiovascualr drugs:

(a) Digitalis

(b) Pharmacotherapy of cardiac arrhythmias – Sodium channel blockers, beta blockers, Potassium channel blockers, Potassium channel blockers, calcium channel blockers.

(c) Pharmacotherapy of Hypertension - Clonidine, alpha methyldopa, Gunanethidine, Reserpine, Phentolamine etc.

7. Drugs acting on Blood & blood forming organs:

(a) Drugs effective in iron deficiency anemia's.

(b) Treatment of Acute Iron Poisoning.

8. Water, Electrolytes & drugs affecting Renal functions:

(a) Nutritional supplementation therapy.

(b) Diuretic & Anti diuretic drugs.

9. Drugs used in GIT disorders:

(a) Appetizers, Digestants, Carminatives, Appetite suppressants & Agents lowering serum lipis.

(b) Emetics, drug therapy of vomiting & diarrhea

(c) Pharmacotherapy of constipation.

(d) Pharmacotherapy of Peptic ulcer.

10. Chemotherapy:

(a) Sulfonamides, Cotrimoxazole, Nitrofurans

(b) Penicillin's & Antibiotics effective against Gram positive organisms.

(c) Antibiotics effective against Gram negative organisms.

(d) Antibiotics effective against both Gram Positive & gram negative organisms.

(e) Tetracyclines, Chloramphenicol & antifugal agents.

(f) Chemotherapy of UTI, STD, Tuberculosis, Leprosy,
Malaria, Amoebiasis, Viral infections, Helminthiasis, Malignancy.

(g) Antiseptics & Disinfectants

11. Drugs used in Endocrine disorders:

(a) Thyroid &anti thyroidal drugs.

(b) Insulin & oral Antidiabetic drugs.

(c) Adrenal cortical steroids.

(d) Gonadotropins, Estrogens, Progestins

(e) Ant fertility agents & Ovulation including drugs.

12. Pharmacotherapy of Gout and Rheumatoid Arthritis.

13. Therapeutic Gases-oxygen and Carbon Dioxide

14. Vitamins

15. Immunotherapy, Immuno-suppressants & Immuno - stimulants.

TEXT BOOKS RECOMMENDED:

1. Pharmacology &

Pharmacotherapeutics - R.S. Satoskar

-S.D. Bhandarkar

-S.S. Ainapure

2. Essentials of Medical

Pharmacology - K.D. Tripathi

B.N.Y.S IIIrd Year (DURATION – 12 MONTHS

SL.NO.	SUBJECT	DURATION OF STUDY
1.	Forensic Medicine & Toxicology	12 months
2.	Community Medicine	12 months
3.	Psychology & Basic Psychiatry	12 months
4.	Obstetrics & Gynecology	12 months
5.	Yoga & Physical Culture II	12 months
6.	Nutrition & Herbology	12 months
7.	Massage, Chiropractice, Osteopathy And Aromatherapy	12 months

PRACTICALS *: -ALL THE OTHER SUBJECTS HAVE PRACTICAL.*

FORENSIC MEDICINE & TAXICOLOGY

(Duration of study-12 months)

THEORY

(A) FORENSIC MEDICINE: -

Definition and scope of forensic medicine
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 – medico-legal aspects, certification of death, sudden death, causes, medico-legal importance of signs of death, changes due to 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, hair and seminal stains
8. Miscellaneous causes of death from heat, cold, electricity, starvation etc.
9. Violent asphyxia deaths – hanging, strangulation, suffocation, and drowning
10. Sexual offences – impotency and sterility, virginity, legitimacy, unnatural offences, medico-legal aspects
11. Infanticide
12. Medico-legal aspects of insanity
13. Forensic psychiatry
14. Deifinition, police inquest, difficulties in detection of crime, legal procedure in criminal courts and their powers oath, medical evidence, medical certificate, dying declaration
15. Rules of giving evidence, professional secrecy
16. Postmortem examinations
17. Death – signs of death, cadaveric rigidity and spasm, putrefaction, estimation of time since death
18. Death from asphyxia, differences between hanging and strangulation, suffocation and drowning
19. Death from burns, scalds and lighting
20. Rape and unnatural offences
21. Abortion, pregnancy and delivery, miscarriage
22. Laws 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 poison, factors, modifying their action
    b. Diagnosis of poisoning
    c. Treatment of poisoning in general
2. Poisons
    a. Corrosives
    b. Non-metallic poisons
    c. Insecticides and weed killers
    d. Metallic poisons
    e. Organic irritant poisons
    f. Somniferous poisons
    g. Inebriant poisons
    h. Deliriant poisons
    i. Drug dependence
    j. Food poisoning
    k. Spinal poisons

l. Cardiac poisons
    m. Asphyixiants
    n. Miscellaneous

3. Legal responsibilities – Medical Ethics104
4. Responsibilities and duties of medical practitioners to the State, professional secrecy and privileged communication
5. Unprofessional conduct, malpractice
6. The rights and privileges and duties of medical practitioners
7. The functions of state medical council and its relationship to IMC
8. Medical ethics approved by IMC

Medical Jurisprudence

PRACTICALS: -

1. Age estimation.
2. Autopsies-10
3. Skeleton remains. - By Modi
4. Spotters. - By NarayanaReddy
5, Examination of injured. - By M.R.K. Krishna
6, Alcoholic.
7, Psychiatric. -By Dr. C.J. Poison
8. Toxicology. - By D.J Gee and B. Knight

TEXT BOOKS: - - By Corden and Shapiro

1. Medical jurisprudence
2. A text book of Forensic Medicine -By Taylor's
3. A textbook of forensic medicine

REFERENCE BOOKS: -

1. The essentials of forensic medicine
2. Forensic Medicine
3. Principles and practice of

COMMUNITY MEDICINE

(Duration of study -12 Months)

THEORY

1. Evolution of Medicine --Ancient Medicine, Scientific Medicine, Modern medicine, Medical Evolution.

2. Concepts in Community Health -Concepts of Health, Health & Development. Indicators of Health. Concepts of Diseases, concepts of prevention,disease control & Eradication. Public Health, Social Medicine, Community Medicine, Health services, Planning& Management, Risk approach, evaluation of health services.

3. General Epidemiology -

Introduction, Measurement of Mortality & Morbidity,Epidemiologic Methods - Descriptive Studies, AnalyticalStudies, Intervention Studies, Association & Causation, Uses of Epidemiology, Infection Diseases Epidemiology, Disease Transmission Immunity, Immunising Agents, Disease Prevention & Control, Disinfection, Investigation of an Epidemic.

4. Genetics.

5. Screening of Diseases -

Concepts, Uses, Criteria for screening, Sensitivity & Specificity.

6. Epidemiology of comunicable Diseases -

(a) Respiratory Infections - Small Pox, Varicella, Measles, Rubella, Mumps, Influenza, Diphtheria, Pertusis, Tuberculosis.

(b) Intestinal Infections - Polio, viral hepatitis, cholera, Acute Diarrhoeal Diseases, Typhoid, Food poisoning,Amobiasis, Ascariasis, Ancylostomiasis, Taeniasis.

(c) Arthropod - bone infectoins ,Yellow fever, Japanese Encephalitis, Malaria, Filaria.

(d) Surface Infections - Rubies, Trachoma, Tetanus, Leprosy, STD, AIDS.

7. Epidemiology of non-communicable diseases -

Cancer, Cardio-vascular, diseases, diabetes, obesity, blindness, Accidents, Hypertension, Stoke, Rheumatic Heart Disease.

8. Demography & Family planning

Demographic cycle, population trends, fecility related statistics, health aspects of family planning, contraceptive methods and delivery system, National family welfare programme.

9. Preventive Medicine in Obstetrics Paediatrics & Geriatric-Antenatal, Intranatal, Postnatal care, Low Birth weight, Infant Feeding, Growth & Development, Growth Chart, Under Fives clinic, National Health Policy, Indicators of MCH care, School Health Services, Behavioral problems, Gariatrics.

10. Environmental Health-& Occupational HealthPurification of Water & Water Quality Standards, Air,Ventilation, Lighting, Noise, Radiation, Air Temperature &Humidity, Housing, Solid Wastes Disposal & Control,Excretory Disposal, Water Carriage System, ModernSewage Treatment, Entomology- Mosquito, Housefly, Lice,Itchmite, Cyclopes, Rat Flea, Rodents, Insecticides -Hazards, Diseases, Pre-placement examination, Measuresfor general health, protection of workers, prevention ofoccupational diseases, legislation.

11. Basic medical Statistics -

Censes, Vital Events, Legislation, SRS, Notification ofDiseases, Measures of Dispersion & centring, Sampling, Tests of significance, correlation & regression,

12. Health Education and communication -

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

13. Health planning - Management - International HealthOrganisations.

Planning cycle, Management Methods & Techniques,National Health policy, Health planning in India, Five Year plans, Health systems in India - at Center, State and DistrictLevels, Panchayat Raj, Rural Development Schemes.

14. Health Care of Community - Health System and NationaHealth ProgrammesLevels of Health Care, Health for all, primary health care,health care delivery, health problems, health care servicesand systems. Voluntary Health Agencies, National Health Programmes.

15. Nutrition and Health:

Classification of food, vitamin, mineral, carbohydrate,protein, fat, energy balance, balanced diet, nutritionalproblems in public health low birth N+ Pem, xeropthalmia,Nutritional anaemia, IDP, Endomic fiurosis, Lathyrism,Nutritional factors in selected disease. Assessment ofNutritional status, Nutritional surveillance. Social aspectsof Nutritional food hygine, food borne disease.

16. Personal Hygiene:

(1) Sun Bathing , (2) Hygiene of eating and drinking, (3) Rest, sleep, recreation and work, (4) PersonalCleanliness, (5) Mental Hygiene, (6) HealthDestroying Habits Pan, Suspan, Ganga, Drinks, Smoking,Coffee, Tea etc.

Mental Health ,Health Programmes in India.

PRACTICALS: -

1. Insecticides
2. Universal Immunization Programme
3. Communicable Diseases
4. Insect Bone Diseases
5. Microscope Slides
6. Environment and Sanitation
7. Statistical Charts
8. Field Visits
   (a) Rural health Centers.
   (b) Sewage Disposal Plant.
   (c) Water Filteration Plant
   (d) Nature cure Hospitals.
   (e) Yoga Institutes etc.

TEXT BOOKS:-

1. Text Book of preventive and Social Medicine. - ByJ.E. Park & K. Park
2. Text book of Preventive and Social Medicine - By B.K. Mahajan & -M.C.Gupta

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REFERENCE BOOKS:

1. Preventive Medicine -By Dr. Gosh
2. Preventive Medicine - By Dr. Yeshpal, Bedi.

REFERENCE PAPERS: -

World Health Organization Programmes Papers.

National Health Programmes Papers.

Voluntary health Programmes Papers.

Red Cross Programmes Papers

Unicef Programmes Papers

PSYCHOLOGY & BASIC PSYCHIATRY

(Duration of study -12 Months)

THEORY

PART-I

A. Psychology

Unit 1: The Evolution of Psychology- How psychology developed from speculation to science

1. Studying the mind and behaviour
2. Early scientific approaches to psychology
3. Structuralism
4. Functionalism
5. Contemporary approaches to psychology
6. Behavioural approach
7. Psychodynamic approach
8. Cognitive approach
9. Behavioural neuroscience approach
10. Evolutionary psychology approach
11. Sociocultural approach
12. Positive approach to psychology: Humanistic movement and the positive psychology movement

Unit 2: Sensation and Perception

1. How we sense and perceive the world
2. The visual system
3. The auditory system
4. Other senses
5. States of consciousness
6. Levels of awareness
7. Sleep and dreams
8. Altered states of consciousness
9. Hypnosis
10. Meditation
11. Drug induced states

Unit 3: Learning and Memory

1. Types of learning
2. Classical conditioning
3. Operant conditioning
4. Observational learning
5. Cognitive factors in learning

Unit 4: Memory

1. Nature of memory
2. Memory encoding: getting information into memory â€“ the role of attention
3. Levels of processing
4. Enriching encoding

11. Memory storage
12. Sensory memory
13. Short-term memory
14. Long-term memory
15. Memory retrieval
16. Serial position effect
17. Retrieval cues and the retrieval task
18. Retrieval of autobiographical memories
19. Retrieval of emotional memories
20. Forgetting
21. Biochemistry of memory
22. Neural circuitry of memory
23. Anatomy of memory
24. Are there multiple memory systems? Implicit versus explicit memory
25. Declarative versus procedural memory
26. Semantic versus episodic memory

Unit 5: Thinking and Language

27. The cognitive revolution in psychology
28. Concept formation
29. Problem solving
30. Critical thinking
31. Reasoning and decision making
32. Language and thought language acquisition and development

Unit 6: Motivation and Emotion

1. Approaches to motivation
2. Evolutionary approach
3. Drive reduction theory
4. Optimum arousal theory
5. The cognitive approach
6. Hunger
7. The biology of hunger and thirst
8. Environmental factors in the regulation of hunger
9. Eating and weight
10. Sexuality - the biology of sex and the human sexual response: cognitive and sensory/perceptual factors
11. Cultural factors
12. Psychosexual dysfunctions
13. Sexual behavior and orientation

Unit 7: Intelligence

1. Nature of intelligence
2. Intelligence testing
3. Neuroscience and intelligence
4. Theories of multiple intelligences
5. The extremes of intelligence and creativity
6. The influence of heredity and environment

Unit 8: Human development across the life span

1. Exploring human development
2. Prenatal development
3. Child development: physical, cognitive and socio emotional development in childhood
4. Adolescence positive psychology and adolescents
   Physical, cognitive and socio emotional development in adolescence
5. Adult development and aging

6. Physical, cognitive and socio emotional development in adulthood

Unit 9: Personality

1. The nature of personality
2. Psychodynamic perspectives
3. Behavioral perspectives
4. Humanistic perspectives
5. Biological perspectives and contemporary empirical approaches to personality

Unit 10: Stress coping and health

1. The nature of stress
2. Major types of stress
3. Responding to stress
4. The effects of stress on psychological functioning
5. The effects of stress on physical health
6. Factors moderating the impact of stress
7. Health-impairing lifestyles
8. Reactions to illness
9. Improving coping and stress management

Unit 11: Social Psychology

1. Social thinking
2. Attribution
3. Social perception
4. Attitudes
5. Social influences
6. Conformity and obedience
7. Leadership
8. Inter group relations
9. Group identity
10. Prejudice
11. Ways to improve interethnic relations
12. Social interaction
13. Aggression
14. Relationships
15. Attraction
16. Love
17. Relationships and gender

B. Abnormal psychology: Psychiatry

Unit 1: Abnormal behavior in historical context- the science of psychopathology

1. The historical conceptions of abnormal behavior
2. The supernatural tradition
3. The biological tradition
4. The psychological tradition
5. An integrative approach to psychopathology
6. One-dimensional and multidimensional models
7. Genetic contributions to psychopathology neuroscience and its contributions to psychopathology
8. Behavioral and cognitive science
9. Cultural, social and interpersonal factors
10. Classification of psychological disorders: DSM IV and ICD 10 Classifications

Unit 2: Anxiety disorders

1. Generalized anxiety disorders
2. Panic disorders; phobias
3. Obsessive-compulsive disorders

Unit 3: Somatoform and Dissociative disorders

1. Hypochondriasis
2. Somatization disorder
3. Conversion disorder
4. Pain disorder
5. Dissociative disorders

Unit 4: Mood disorders

1. Depressive disorders
2. Bipolar disorders
3. Suicide

Unit 5: Substance-related disorders

1. Depressants
2. Alcohol use disorders
3. Sedative substance use disorders
4. Hypnotic substance use disorders
5. Anxiolytic substance use disorders
6. Stimulants
7. Amphetamine use disorders
8. Cocaine use disorders
9. Nicotine use disorders
10. Caffeine use disorders
11. Opioids use disorders
12. Hallucinogens
13. Marijuana
14. LSD
15. Other Hallucinogens
16. Other drugs of abuse

Unit 6: Schizophrenia and other psychotic disorders

1. Schizophrenia
2. Clinical description
3. Causes
4. Types and treatment
5. Personality disorders – cluster A, B and C
6. Psychotherapies
7. sychodynamic therapies
8. Behavioural therapies
9. Humanistic therapies

Unit 7: Mental health and Yoga

References:

1. Weiten, Wayne (1995) themes and variations 3rd edition, New York Brooks/Cole Publishing company
2. Santrock, J.W. (2005) Psychology, 7th edition , New York, McGraw Hill publications
3. Barlow , D.H. and Durand, V.M. (2002) Abnormal Psychology, 3rd edition , United States, Wadsworth Thomson Learning

OBSTETRICS AND GYNAECOLOGY

(Duration of study -12 Months)

THEORY

Section - A

1. Basic Anatomy & Physiology:
   - **(a)** Anatomy and Physiology of female generative 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) Foetus in normal pregnancy
   - (e) Ante-natal care.
3. Physiology of Labour: -
   - (a) Causation and stages of labour.
   - (b) Mechanism of labour
   - (c) Conduct of normal labour
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) Venereal diseases
   - (c) Anemia in pregnancy
   - (d) Diseases of urinary system
   - (e) Diabetes in pregnancy
   - (f) Diseases and abnormalities of fetal membranes ar placenta
   - (g) Abortion
   - (h) Ectopic Pregnancy
   - (i) Ante-partum hemorrhage
   - (j) Placenta Previa
   - (k) Abruplio Placenta
   - (I) Hydatidiform mole

(m) Chlorio-carcinoma

(n) Toxamia of pregnancy

(o) Pre-eclampric toxemia

(p) Hydramnios

(q) Oligo Hydramnios

6. Pathology of Labour: -

(a) Occipito - posterior position

(b) Breech presentation

(c) Prolapse of the cord, compound presentation.

(d) Multiple pregnancy

(e) Contracted pelvis, cephalo, pelvis disproportion

(f) Management of labour in contracted pelvis

(g) Complications of 3rd stage of labour

(h) Face presentation

(i) Brow presentation

(j) Transverse presentation

7. Affection of New-Born

(a) Asphyxia neonatorum

(b) Pre-term baby

(c) Congential malformations.

8. Obstetrical Operations: -

(a) Forceps

(b) Cassarean section

(c) Induction of abortion and labour

9. Pathology of Puerperium: -

Pueroperal 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 labour

(g) Ultra sonogram in Obstetrics

Section-B

1. Gynaecological diagnosis.
2. Malformation of female generative organs
3. Disease 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, Ovaries, Tuber, Cervix, Ext. Genitalia
11. Endometritis-Acute & Chronic
12. Vesico-vagwinal Fistula
13. Endometriosis and adenomyosis
14. Diseases of ovary
15. Pelvic inflammatory diseases.

PRACTICALS :-

1. History taking of ante-natal and gynaecological cases
2. Demonstration of physical examination of ante-natal and Gynaecological cases.
3. Demonstration of Conductive labour, normal delivery and use of minor instruments during delivery.
4. Demonstration of various equipments used in obstetrics and Gynaecology.
5. Case-history writing of ante-natal and gynaecological cases

(25)

RECOMMENDED TEXTBOOKS: -

1. Clinical Obstetrics - By Mudaliar and Menon
2. Text Book of Obstetrics - By C.S. Dawn
3. Shaw's Text Book of Gynaecology
4. Text book of gynaec c.s.dawn
5. text book of ob dutta.

YOGA AND PHYSICAL CULTURE - II

(Duration of study -12 Months)

THEORY

1. Patanjali Yoga Sutras:
   (a) The first two chapters in detail i.e.Samadhi Pada &Sadhana Pada
   (b) A brief summary of Vibhuti Pada & Kaivalya Pada

2. Hatha Yoga Pradipika - Full text with necessary reference to Gharenda Samhita & Siva.Samhita

3. Yoga in relation to sports, games, social & political .life.

4. Psychic physiology of Yoga , (a) Definition of Charka(, b) Description of 7 charkas (c) Ida, pingala Ssushmana,(d) Pranic currents & the breath (.e) Altering the flow of nostrils Sbreath (f)Purpose of hata yoga(g) Nadis & nervous system
(h)sensitivity and awareness

5. Eye exercises - benefits, methods, and precautions.

6. Physiological aspects of Asana.

7. Shat Kriyas - Comparative study of shat kriyas with other systems of medicine.

8. Types of exercises a) Isotonic & Isometric

9. Physiological effects of exercises on cvs, respiratory, Muscular, Joints, Skin, ENT.

10. Physical exercises for health & fitness; a) Introduction, b) Who should stretch c) when to stretch d)why to stretch e)How to stretch f) relaxing stretches for i. Back, legs ,feet .and ankles ii. Hips .Hamstring .Low back. g)Stretching ex. For elderly, h) Stretching Ex. For i.Abdominal muscles , ii. Arms, chest , iti. Ankles, legs, knee , thigh, fore arm
(i) Techniques of walking, Running, Cyclining, j) Caring Back

11. SWARAYOGA

PRACTICALS:

1. Stretching Exercises

1. Loosing exercises (Shitilikarana Vyayama and Breathing exercises)

2. All Asana of I & II B.N.Y.S. plus advanced postures from yoga Deepika,

3. Pranayama (as in I & II B.N.Y.S.)

4. Kriyas-(as in I &II B.N.Y.S.)

(a) Dhouti-Vastra, Danda

(b) Gajakarani - (Vaisara Dhouti)

(c) Nauli-all the three types

(d) Shankaprakshalana - laghu & maha shankaprakshalana

(e) Basti

5. Meditation:

(a) Omkara

(b) Cyclic

(c) Vipassana

6. Techniques like:

(a) Self Management of Excessive Tension (SMET)

(b) Pranic Energisation Technique (PET)

(c) Mind Sound Resonance Technique (MSRT)

7. Yoga Nidra (Short and long sessions)

BOOKS RECOMMENDED:

1. Joints & Glands Exercises — Sri Swami Rama, Rudolph M. Ballentine

2. Our Eyes - Aurobindo Ashram

3. Perennial paths of Yoga Kumar kaul

4. The science of Yoga - Taimini

5. Commentary on Patanjali yoga Sutras - Taimini

6. Hatha Pradipika - Kalvalyadhama publications, lonawala.

7. Yoga nidra

8. Kundalini Yoga, Swara Yoga } Bihar school of Yoga, Munger.

9. Tantra yoga

10. Asana

11. Pranayama-V.K. Publications

12. Psychology - Horensce C. Kenipp

13. Religiousness in yoga theory and practice - TKV Desikachar

14. Research Papers - Kaivalya Dhama (publications in yoga Mimamsa - all papers related to physiological effects of Yoga)

15. YOGA IN Education - Dr. Nagendra (Vivekananda Kendra publications)

16. Vipassana-Goenka.

17. Anatomy and Physiology of Yoga - Dr. M.M. Gore

NUTRITION & HERBOLOGY

(Duration of study -12 Months)

PART-I NUTRITION THEORY

1. Definition of food, nutrition, nutrient and diet
2. What is nutrition healing
3. Defining essential nutrients
4. Proteins and amino acids
5. Carbohydrates
6. Lipids, sterols and their metabolism
7. Energy needs: assessment and requirements in humans
8. Electrolytes, water and acid-base balance
9. Minerals – calcium, phosphorous, magnesium, iron zinc, copper, iodine, selenium, chromium, ultratrace minerals
10. Clinical manifestations of human vitamin and mineral disorders
11. Role/significance of nutrition a. Regulation of gene expression
12. Control of food intake
13. Metabolic consequences of starvation
14. Fiber and other dietary factors affecting nutrient absorption and metabolism
15. Nutrition and immune system
16. Oxidative stress and oxidant defence
17. Body composition: influence of nutrition, physical activity, growth and aging
18. Maternal nutrition
19. Nutritional requirements during infancy
20. Diet, nutrition and adolescence
21. Nutrition in the elderly
22. Clinical nutrition assessment of infants and children
23. Clinical and functional assessment of adults
24. Nutritional assessment of malnutrition by anthropometric methods.
25. Laboratory tests for assessing nutritional status
26. Dietary assessment
27. Childhood obesity
28. Assessment of malabsorption
29. Nutrition in pancreatic disorders
30. Nutrition in liver disorders
31. Nutrition and diet in the management of hyperlipidemia and atherosclerosis
32. Nutrition, diet and hypertension

33. Diet, nutrition and prevention of cancer
34. Carcinogens in foods
35. Nutrition and diet in rheumatic diseases
36. Nutritional management of diabetes
37. Obesity
38. Nutritional aspects of hematologic disorders
39. Renal disorders and nutrition
40. Nutrition, respiratory function and disease
41. Diagnosis and management of food allergies
42. Nutrition and diet in alcoholism
43. The hypercatabolic state
44. Nutrition and infection
45. Enteral feeding (only theory)
46. Parenteral nutrition (only theory)
47. Nutrition and medical ethics – the interplay of medical decisions, patients' rights, and the judicial system
48. RDA – individuals and populations
49. Nutritional implications of vegetarian diets
50. Social and cultural influences on food consumption and nutritional status
51. Food additives, contaminants and natural toxins

Part B

1. Water soluble Vitamins
a. Vitamin B Complex
b. Vitamin B1 (Thiamin)
c. Vitamin B2 (Riboflavin)
d. Vit B3 (Niacin)
e. Vitamin B5 (panthothenic Acid)
f. Vitamin B6 (Pyridoxin)
g. Folic Acid
h. Vitamin B12
i. Vitamin C
j. Biotin

1) Fat Soluble Vitamins
a) Vitamin A ((retinol) and retinoids
b) Beta- carotene and Carotenoids
c) Vitamin D
d) Vitamin E (Tocopherols, Tocotrienols)
e) Vitamin K

2) Accessory Nutrients and polyphenols
a) Alpha-lipoic acid
b) L-carnitine
c) Co enzyme Q 10
d) Glucosamine sulphate119
e) Phosphatidylcholine
f) Pycnogenol
g) Quercetin
h) Resveratrol
i) Bromelain
j) N Acetyl cysteine
k) Pancreatic enzymes
l) POLYPHENOLS -Flavanols, Anthocyanidines, flavones, Isoflavones, carotenoids
m) Minerals and trace elements

1) MINERALS
a) calcium
b) Magnesium
c) Phosphorus
d) Potassium
e) Sodium
f) Trace elements
g) Boron
h) Chromium
i) Copper
j) Fluoride
k) Iodine
l) Iron
m) Manganese
n) Molybdenum
o) Selenium
p) Silicon
q) Vanadium
r) Zinc

2) TOXIC METALS
a) Aluminium
b) Cadmium
c) lead
d) mercury
e) Nickel

P R A C T I C A L S :-

1. Visit to the nutrition departments and wards in hospital

2. Field visits - nutrition surveys and diet surveys

3. Formation of the low cost balanced diets for different

population

Recommended textbooks :-

1. Davidson and Passmore Human Nutrition and Dietetics -
   by Passmore, Eastwood
2. Clinical Dietetics and nutrition - by E.P. Kantia
3. Normal and therapeutic nutrition - by Corinne H. Robinson Marilyn R. Lawler.
4. Essentials of food and nutrition - by Swaminathan
5. Foundations of normal and therapeutic nutrition – by Randall. T
6. Nutrition and dietetics - by Subhangini Joshi
7. Sprouts - by J.D. Vaish, Yoga Samasthan
8. Medical secrets of your food - by Aman.
9. Nutritive value of Indian foods-by NIN B.S. Narasinga Rao
10. Food for health APDewan
11. Nutritive values of Indian foods NIN ,ICMR, Hyderabad-
12. All the publications of NIN, Hyderabad -7.

Reference books:-

1. Diet and Nutrition — DR.EIizabath evans
1. Food and Nutrition by Gupta
2. Modern nutrition in Health and disease - by shills
3. Human Nutrition - by Maxine E. Me. Divitt and Sumati Rajgopal
4. Superior Nutrition - by Herbert M. Shelton

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5. All publications on Nutrition - by National Institute of Nutrition, Hyderabad,
6. Periodicals of Indian Journals of Medical Research.
   Indian Journal of Nutrition and Dietetics
   Nutrition survey of India
   A complete guide to Vitamin - Edited by J .1. Rodale and Staff Nutrition
   Chaneyand Ross The complete Book of food and nutrition - by J.I. Rodale
   and staff

PART-II HERBOLOGY

I. Introduction to Herbology.

II. The following herbs are to be studied with respect to their source and therapeutic uses. Botanical details shall be avoided.

1. Acorus Calamus
2. Adethoda Vasica
3. AlliumCapa
4. Allium Sativum
5. AloeVera
6. Amaranthus hypochondriacus
7. Asparagus racemosus (Shatavari)

-8. Azadirachta Indica

9. Benincasa hispida

10. Calendula Offlcinalis

11. Caica papaya

12.Carumcarvi.

13. Catharanthus roseus (vinca rosea)

14. Chamaemelum nobile (Chamomife)

15. Cinchona officinalis

16. Cinnamomum Zeylanicum

17. Citus aurantifolia (lime)

18. Citrus aurentium (orange)

19. Citrus limon (lemon)

20. Citus reticulata (Tangerine)

21. Coriandrum sativum

22. Commiphora mukul

23. Cucurbita maxima

24. Cuminum cyminum

25. Curcuma longa

26. Daucus carota

27. Digitalis lanata

28. Dioscorea deltoidea

29. Eclipta alba

30. Elettaria cardamomum

31. Emblica officinalis

32. Eugenia caryophyllate (Syzygium aromaticum)

33. Ferula assa-foetida

34. Ficus cerica

35. Ficus glomerata

36. Foeniculum vulgare

37. Gaultheria Procumbens

38. Gloriosa Superba

39. Glycyrrhiza glabra (liquorice)

40. Hepatica nobilis

41. Hibiscus rosa-sinensis

42. Hordeum vulgare
43. Jasminum sambac
44. Lawsonia inermis / L.alba(henna)
45.Menthaspicata
46. Momordica charantia
47.Moringaoleifora
48. Murraya koenigii
49. Myristica fragrans
50. Nelumbo nucifera (lotus)
51.Nigellasativa
52. Ocimum sanctum
53-Oryzasativa
54. Panax ginseng
55. Phylanthus emblica
56. Piper longum
57. Piper nigrum
58. Plantagoindica
59. Punica granatum
60. Rauvolfia serpentina(Sarpagandha)
61. Ricinus communis
62. Rosemarinus officinalis
63. Santalum album
64. Satvia officinalis
65. Sesamum Indicum
66. Syzygium aromaticum
67. Tamarindus indica
68. Terminalia chebula
69.Thymusvulgaris
70. Trigonella foenum - graecum
71.Vitisvinifera
72. Withania somnifera (Ashwagandha)
73. Zingiber officinale

MASSAGE, CHIROPRACTICE, OSTEOPATHY AND AROMATHERAPY

(Duration of study -12 Months)

THEORY

1. Introduction and History of Massage

2. Rules, regulations and characteristics of Masseur

3. Structure 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 hands and lubricants of the following systems: - •

(a) Skin

(b) Muscular System

- Nutrition and Development
- Excitation of 'M' contraction of 'M'
- Increase of muscular electro-excitability, removal ofthe fatigue from muscle.

(c) On the ligaments and skeletal system

(d) On the circulatory system

(e) On the nervous system

(f) On respiration - increase of respiratory activity and increase of tissue respiration

(g) On GIT - Improvement in appetite, improvement in secretion of digestive fluids, absorption and improvement in peristalsis.

(h) Excretory system

(i) Powdered Massage - merits and demerits.

5. Getting crisis through massage (Side effects and benefits)

6. Basic therapeutic massage techniques, indication 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 exudate, change in the weight of the person, obese or emaciated.

8. (i) Different massage manipulations, classification and their detailed explanation, uses and centra-indications,

(ii) Manipulative treatment in stress management,

(iii) Shiatsu in manipulative therapy (Acupressure)

(iv) Manipulation and life extension

(v) Dry brush massage

9. Movements of Joints: -

(i) Flexion

(ii) Extension

(iii) Abduction

(iv) Adduction

(v) Supination

(vi) Circumlocution

(vii) Deviations - Medical and Lateral

(viii) Opposition

12. 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 Head

(d) Massage to Spine

(e) Special types of Massage in different diseases.

13. Massage to women

14. Massage to infants and children

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

16. Ayurvedic Massage -Terminology, Methods and Manipulations

17. **CHIROPRACTICE**:

Origin & aims of chiropractice

X - Ray technique and Chiropractice ,Importance of spine in Chiropractice ,Physiological effects of Chiropractice ,Spinal Manipulative Therapy , Chiropractice Examination Treatments in various Diseases

18. **OSTEOPATHY**: -

Definition & the basic principles of Osteopathy Relation of Osteopathy to musculo - skeletal syste

PRACTICALS: -

1. 35 Demonstration classes
2. 10 Demonstrations in Panchakarma
3. Each student should do 35 massages

TEXT BOOKS: -

1. Massage Book - By George Downing
2. Massage -By Constant young
3. Massage Therapy -By Dr. J.H.Kellog
4. The complete book of massage -By Clare Maxwell Hudson
5. Step by Step Massage -By Carole Mc. Gilvery and Gini Reed
6. The Book of massage -By Luinda Lidel
7. Massage to common ailments -By Penny Rich
8. Baby Massage.
   The Magic of Loving Touch -By Auckett , Anelia D
9. Natural Healing from Head to Toe -By Aihara Cornellia
10. Massage Works -By D. Baloti Lawrence and Lewis harrison
11. Manual of Osteopathy Practice - By Alan Stoddard
12. Alternative Chiropractice -By Susan Moore
13. Massage (Ayurvedic) -By Achanta Laxmipathy

REFERENCE BOOKS: -

1. The Panchakarma Treatment of Ayurveda -By T.L.Devaraj
2. Chirotherapy: A Text of Join Movements -By Hesses P.De.
3. Massage Therapy: The Holistic way to
   Physical and mental health -By Jackson Richard
4. Book of Massage and Aromatherapy
   Achieving complete relaxationand well
   Being With massage and essential oils - By Seager, Shoron

PART-II

AROMATHERAPY

1. Definition, Origin and History of Aromatherapy

2. Essential Oils.

(i). Types of Essential Oils.

(ii). Extraction of Essential Oils - Distillation, Cold Pressing or expression, Solvent Extraction.

(iii). Storage of essential Oils.

(iv). How to recognize an essential oil.

(v). How to select Aroma Oils.

(vi). How essential oil works

(vii). Carrier oils - Almond Oil, Apricot kernel oil, Avocado oil, Carrot oil. Corn Oil, Primrose oil, Grapeseed oil, Hazelnut Oil, Jojoba Oil, Olive Oil, Peanut Oil, Safflower oil, sesame oil, soya been oil, sunflower oil.

3. Different methods of using essential Oils:Inhalation, Diffusers, Vaporizers, Massage, Baths, Foot bath, Pot pourii, Compresses, Oral intake, beauty treatment, room sprays, insect repellents etc.

4. Description of different Essentials Oils & their benefits.

* Amrette Seed
* Aniseed
* Angelica
* Basil
* Bergamot
*Black Pepper
* Camphor
* Cardamom
* Chamomiie
* Clove Bud
* Cedar Wood
* Cypress
* Clay Sage
* Eucalyptus

*Fennel

*Frankincense

*Geranium

*Ginger

*Juniper berry

*Lavender

*Lemon

*Lemon Grass

*Marjoram

*Neroli

*Orange

*Palmarosa

*Peppermint

*Patchonli

*Petitgrain

*Pine

*Rose

*Rosemary

*Sand a I wood

*Tarragon

*Tea Tree

*Thyme [White]

*Vetiver

*Ylang Ylang

5. The best essential oils:

(a) The five fragrance categories - Green, floral, citrus, Woody & Spicy.

(b) Mixing of Aroma Oils, equipment required for mixing oils.

6. Aroma Oils for common problems:

Acne, Anxiety, Athlete's Foot, Arthritis, Back Ache, Bites &Stings, Breathing Problems, Bunion, Bruises, Burns,Chicken Pox, Chilblains, Poor Circulation, Cold, cough. Cramps, Cuts & Abrasions, Dandruff, Depression, Dermatitis, Psoriasis, Eczema, Fatigue, Fluid Retention, Fungal Infection, Hair Loss, Oily hair, Dry Hair, Hang over, Head ache, Herpes, household cleansers, Indigest.on, influenza, Insomnia, Insect Repellents, Measles,

Menopause, Nausea, obesity, Excess Sweating, PMT, Rheumatism, Sexual Problems, Skin Problems, Stress, SunBurn etc.

7. Specific features of Aroma Oils:

Analgesic, Antidepressant, Anaphrodisiac, Antiinflammatory, Antiseptic, Antiviral, Astrigent, Aphrodisiac,Bactericide, Cephalic, Chalagogue, Cytophylat.c, Deodorant, Detoxifying, Diuretic, Emmenagogue, Expectorant, Febrifuge, Fungicidal, Hepatic, Hypertensive, Hypotensive, Hypnotic, Immuno-stimulant, Nervine, Sedative, Stimulant, Tonic

8. Precautions for the use of Aroma Oils: Skin Patch Test To test Essential Oils in its pure state.

9. It effects of aroma oils - in Eyes, Toxic effects, Allergic effects etc.

10. Careful handling of essential oils.

11. Contraindications:

(a) Oils to be avoided - Phototoxic or Photosensitive oils, Oils to be avoided in pregnancy, oils that cause skin irritation etc.

(b) Oils Contraindicated in - Asthma, Anorexia, Cancer, Epilepsy, Hypertension, Hypotension, Liver disease. Peptic Ulcers.

BOOKS FOR REFERENCE:

1. All you wanted to know about Aromatherapy – Lalitha Sharma
2. AROMATHERAPY-JULIE SADLER
3. Health and Beauty through Aromatherapy – Blossom Kochhar.
4. Ayurveda and Aromatherapy - Dr. Light Miller & Dr. Bryan Miller.

B.N.Y.S. IVth Year (DURATION -12 MONTHS)

SI.NO.	SUBJECT	DURATION OF STUDY
1.	Yoga Therapy	12 months
2.	Hydrotherapy & Clay therapy	12 months
3.	Fasting & Diet therapy	12 months
4.	Chromo therapy & Magneto therapy	12 months
5.	Physiotherapy	12 months
6.	Acupuncture, Acupressure, Reflexology, Pranic healing &Reiki	12 months
7.	Minor Surgery, First aid and Emergency Medicine	12 months
8.	Research Methodology & Recent Advances	12 months

PRACTICALS *: -ALL THE SUBJECTS HAVE PRACTICAL.*

YOGA THERAPY

(Duration of study - 12 Months)

01. Introduction to yogic therapy / Basis of yogic therapy.

02. Role of general exercises

Viz: - Gardening, Swimming, Streching Ex., Aerobic Ex.,Walking & Bare foot walking in curing genera! diseases

03. Research methods in yogic therapy, Statistical analysis

etc.

04. Yogic therapy for: -

(a). - Cardio-vascular diseases

(b). Psychic diseases

(c) . Mental retarded diseases

(d). Neuro Muscular diseases

(e). Digestive diseases

(f). Hormonal diseases

(g). Respiratory diseases

(h). Metabolic diseases

(i). Ophthalmologic disorders

(j). Pediatric disorders

(k). E.N.T. disorders

(I). Obstetrics & Gynecological disorders

10. Meditation and its applications on psychosomatic disorders

11. Relaxation & its Techniques

(a) Art of relaxation

(b) Training the mind

(c) Experiences in yoga Nidra

(d) Yoga nidra & Brain

(e) Symbols of the unconscious

(f) Emerging into Samadhi

(g) Practice of yoga Nidra

(h) QRT - Quick Relaxation Technique

(i) IRT - Instant relaxation technique

(J) DRT - Deep relaxation technique

12. Teaching methods of Yoga to Public, students and patients,

Model 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. Yoga and Mental health - Total integration of Personality, correct mental behavior and attitude, harmonious relationship of body and mind, self content tranquilizing effect. Mental, Psychology of spiritual growth, spiritual value, toning judgment, pure consciousness, mode of living and disciplined life.

17. Applied Psychology: -

(a). Stress - Its causes, effects and control.

(b). Historical perspective, identifying psychological disorders.

(i) Anxity disorders.

(ii) Dissociative Disorders

(iii) Somato form disorders

(iv) Sexual disorders

(v) Mood disorders

(vi) Personality disorders

(vii) Schizophrenia

(c). Therapy for psychological disorders psychotherapy, therapy of Interpersonal relations, behavior therapy

18. Correction of displaced Nabhi.

19. Therapeutic Benefits of Yogic sukshma vyayam, sthula vyayam, Shakti Bandha series, sudarshana kriya.

20. Yoga &diet.(Yogic Diet)

REFERENCE BOOKS: -

1. Yogic Therapy - Dr. Vinekar, Govt. of India Publication

2. Yogic Therapy - Dr. Giarde

3. Treatment of Common Diseases - Swami Satyananda Saraswati through yoga

4. Seminar on yoga

Science & Man - CCRYN, Delhi publication

5. Yoga Nidra - Swami Satyananda Saraswati

6. All Bihar School of yoga Publication-Bihar School of Yoga

HYDROTHERAPY & CLAY THERAPY

(Duration of study- 12 Months)

PAPER- I

01. Introduction and history.

02. Physical properties and chemical composition of water.

03. Physiological basis of Hydrotherapy

The skin and its anatomical construction, functions of the skin, temperature sense.

04. 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.

05. Importance of water to human body.

06. Physiological effects of water on different systems of the body

(i) General and Physiological aspects of heat upon: -

a. Skin

b. Respiration

c. Circulation

d. Nervous system

e. Heat and its production, dissipation etc.

f. Tactile and temperature sense.

(ii) General and physiological effects of cold upon skin, respiration, circulation, nervous system, G.I.T., Body temperature and its maintenance, nervous system and circulatory system, digestive system.

07. Reflex areas of the body, results of the application of hot and cold over reflex areas.

08. Actions and reaction, incomplete reaction, conditions that encourage and discourage reaction, internal reaction, thermic reaction, modified thermic reaction.

09. Place of water in preservation.

10. Place of water in Acute diseases.

11. Place of water in chronic diseases.

12. Magnesium sulphate-use in Hydrotheraphy.

PART II

01. General principles 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 how to avoid them.

(e) General indications and centra-indications.

02. Therapeutic actions and use of Hydrotherapy

(a) Classification of Hydriatic effects, General principles excitation and depression.

(b) Primary exitent effects when to apply and when not to apply.

1. Local haemostatic effects - Hydriatic heart tonics

2. Cardiaceffects - Hydratic heart tonics.

3. Uterine excitations, emanogogic effects.

4. Vesical excitations.

5. Intestinal excitation, peristalitic 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 in the following.

3. Anemia, Neurasthenia, Hypochondria, Cerebral congestion, Rheumatism, Diabetes millitus, Valvular heart diseases.

4. Calorific effects.

5. Diaphoretic effects

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

6. Expectorant effects.

7. Diuretic effects - Brights disease. Uraemia - eclampsia.

8. Atomic Dyspepsia, Hyperacidity.

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

(d) **Resolvent effects**

Sedative effects - general sedatives - local sedatives.

(i) Sedatives of the circulatory system - antiphlogestic effects, inflamation, pneumonia, Pleurasy and other acute disorders,

(ii) Nerve sedatives, Hypnotic, calmative, analgesic

anasthetic, antispasmodic, insomnia, chorea, spasticparalysis, exopthalmic, goiter, mania, epilepsyand various painful conditions.

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

(iv) Secretory 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.

03. The techniques of Hydrotherapy:

- Plain water bath

- Cold hip bath
- Kellog's & Kunhe's sitz bath for males, females hand and arm bath, foothbath, hot and cold alternative leg bath.
- Shallow bath .
- Natural bath
- Non revulsive bath
- Immersion bath
- Cold plunge bath
- Whirl pool bath
- Aeration bath
- Viechy spray massage
- Rapid bath,
- Brand bath
- , Fever bath.
- River bathing,
- Sea bathing.

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

05. Pool Therapy: -

a. Introduction.

b. Principles of treatment Part I and Part II

c. Physiological and Therapeutic effects of exercise in warm water.

d. Indications and centra-indications.

e. Dangers and precautions

06. Douches: -

1. Cold Douche
2. Hot Douche
3. Neutral Douche
4. Alternative Douche

Under water Douche

- Contrast Douche
- Horizontal Jet
- Caphalic Douche
- Lumbar Douche
- Fan Douche
- Rain Douche or Shower Douche
- Heptic Douche
- Circular Douche and Semi circular Douche
- Cerebrospinal Douche
- Plantar Douche
- Percussion Douche
- Scotch Douche
- Revulsive douche
- Ascending Douche
- Calliper Douche
- Filliform Douche
- Fog Douche
- Massage Douches
- Shoulder douche
- Thoracic Douche
- Abdominal Douche
- Anal douche
- Perinea! Douche
- Pulmonary Douche
- Cardiac Douche
- Gastric Douche
- Enteric Douche
- Renal Douche
- Articular Douche
- Vapor Douche

07. Fomentation and Stupes: -

The hot water bag, the siphon hot water bag, the thermopore, the mustard fermentation, clay and glycerine poultice, charcoal poultice, cotton poultice.

08. Compresses and Packs: -

The wet sheet pack, cooling pack, cold shower pack, sweating pack, dry pack, half pack, hot blanket pack, evaporating pack, very cold compress, proximal compress,

neutral compress, alternate compress, revulsive 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, anti diabetic pack

SPECIAL FORMS OF COMPRESS: -

Caphalic compress. Chest pack, Triangular Chest pack, Half chest compress, Joint compress, Pelvic pack, Foot pack,Cold spinal compress, Towel chest pack, Pericardia! or cardiac compress. Hip Pack, Leg pack, Perineal compress, prone packs, Lumbar compress.

09. Internal Use of water: -

Irrigation's and enema (Colon Flushing) , colon hydrotherapy ,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 defence of the organism.

b. Procedures for increasing vital resistance

c. Procedures which excite the central ganglia

TEXT BOOKS: -

1. Baths -By S.J.Singh
2. My Water Cure -By Sebastian Kneipp
3. Rational Hydrotherapy -By DR. J.H. Kellog
4. The Healing Clay -By Michel Abserra
5. Our Earth and Cure - Raymond Dextroit

REFERENCE BOOKS: -

1. Hand Book of Hydrotherapy -By Shew Joel
2. Hydrotherapy in Practice -By Davis , B.C & Harrison, R.A
3. Medical Hydrology -By Sidney Licht

FASTING THERAPY & DIET THERAPY

(Duration of Study - 12 Months)

THEORY

I. Introduction:

1. Theory of fasting in animals
2. History of Fasting
   (a) Fasting in Ancient India
   (b) History of Fasting in India
   (c) History of Fasting in foreign Countries
   (d) Historical highlights of Fasting
   (e) what is fasting therapy and langham
3. Science and 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) Theory and Physiological facts of fasting.

(d) Objections commonly raised in fasting therapy

(e) Pros and Cons of fasting

III. Physiology of Fasting and Starvation

1. General Physiology
2. Source and metabolism of carbohydrates, fats and proteins during fasting and starvation.
3. Difference between fasting and starvation
4. Difference between hunger and appetite.

IV. Rules & Regulations of Sane Fasting and Therapeutic Fasting

V. Definition and classification of Fasting

1. Definition of fasting in different aspects
2. General classification of Fasting (Religious, Political and Therapeutics)
3. Methods and types of therapeutic fasting (Dry, Water, Juice, Saline, Monodiet (Kalpa), Fruit, Intermittent, Preventive, Weekly etc.,)

VI. Hygienic Auxiliaries of Fasting

1. Air and Breathing
2. Enema
3. Bathing
4. Clothing
5. Water Drinking
6. Exercise
7. Mental influence

VII. Study of Patients During and After Fasting

1. Crises during fasting and their management.
2. Physiological effects of fasting
3. Physiological aspects
4. Study of the tongue, the breath, the temperature and pulse etc.
5. The loss and the gain of weight
6. How and when to break the fast.
7. How to break the fast

VIII. Indications and contraindications 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 & Types

(b). Aetiology

(c). Treatment

5. Fasting for preservation of health and prevention **of** diseases.

IX. Results of Fasting

PRACTICALS: -

Study of 50 fasting cases

Case study 25 with record

TEXT BOOKS :-

1. Fasting for healthy and long life - By Hereward Carrington
2. The Fasting cure and Vital Economy - By Lakshmana Sharma
3. Fasting Can Save Your Life - By Herbert M Shelton
4. The Effects of Fasting - By Dorald Upton
5. Fasting as a way of life - By Allan Coll M.D.
6. Fasting Can Renew Young life - By Herbert M. Shelton
7. Scientific Fasting - By Hazzard, Linda Burfield
8. Fasting for regeneration - By Seaton, Julia

REFERENCE BOOKS: -

1. The Philosophy of fasting - By Edward Eaul Purinton
2. Vitality, Fastingand Nutrition - By Hereward Carrington
3. The Fasting Cure ,- By Upon Simelair
4. The Fast-Wayof Health - By Harold R. Brown
5. Fasting the Master Remedy
6. Fast for Health - By John Joseph Picker
7. The Biology of theHuman Starvation - By Keys, Ancel
8. Fasting Story No. 1 - By Health Research
9. Fasting Story No. 2 - By Health Research
10. Rational Fasting - By Ehret Arnold
11. Explaining Fasting - By Forstor, Roger
12. Hints on Fasting Weil - By Carrington, Hereward etc.

DIET THERAPY

1. Concept of Health in Naturopathy
2. Dietetic principles in Naturopathy
3. Concept of wholesome diet
4. Medical 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 and their effects and uses :-
   Wheat grass, Beet root, Cabbage, Carrot, Cucumber, Lattuce, Garlic, Onion, Lemon, Papaya, Pineapple, Mango, tomato, Pomegranate, Grapes, Apple, Bitter ground, Pumpkins etc.
   (c) Sprouts, their nutritive values and methods of sprouting.
   (d) Food values in raw states, germinated form and cooked form.
   (e) Comparison with raw and cooked foods
7. Food combination and health
8. Health and herbs
9. Naturopathic Hospital Dietetics and their classification
10. Disease management with diet Diabetes, Renal diseases, Anemia, PEM, Peptic Ulcer,Constipation, Malabsorption Syndrome, Liver disease like Jaundice, Fatty liver etc. HBP, LBP, Atherosclerosis, Gall Bladder disease, Cancer, T.B. and Arthritis, obesity .Heart diseases etc
11. Food allergy and dietary management
12. Dietary modification for specific condition
13. Dietary reaction for a different population groups with special reference to pregnancy, Lactation, infancy.
14. Seasonal changes in the dietary pattern in Ayurveda / Naturopathy and Modern nutrition.
15. Food hygiene and health
16. Methods of cooking and nutrient losses and preservation.
17. Naturopathic approach towards vegetarian and non vegetarian food
18. Harmful effects of the food colors, preservatives, pesticides, artificial manures.

19. Dietary fibre and its therapeutic effects {e.g. constipation, Ano-rectal disorders, colonic disorders, GIT disorders, D.M.etc.)
20. Geriatric nutrition and diet.
21. Diet and exercise, sports, games, athletics
22. Pediatric Nutrition
23. Nutrition and life span
24. Green vegetables and fruits
25. Non-vegetarian diet its positive and negative aspects in Naturopathy.
26. Customs and manners of eating different views, Effects of emotional state of food utilization.
27. Kalpa therapy in Naturopathy: grapes, mango, matha, milk, etc.

PRACTICALS :-

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

Recommended Text Books :-

1. Davidson and Passamore Human Nutrition and Dietetics - by Passmore, Eastwood
2. Clinical Dietetics and Nutrition - by E.P. Antia
3. Normal and Therapeutic nutrition - by Carinne H. robinson, Marilyn R. Lawler.
4. Essentials of food and nutrition - By Swaminathan
5. Foundations of Normal and Therapeutic nutrition – by Randall Teltaf
6. Nutrition and dietetics - by Subhangini Joshi
7. Sprouts - by J.D. Vaish, Yoga Samsthan
8. Medical Secrets of your food - by Aman
9. Diet & Nutrition -Rudolph bailentine

REFERENCE BOOKS :-

1. Food and Nutrition - by Gupta
2. Modern Nutrition in Health and diseases - by shills
3. Human Nutrition - by Maxine E. Me. Divitt and Sumati Rajgopal
4. Superior Nutrition - by Herbert M. Shelton
5. All publications on Nutrition - by National Institute of Nutrition, Hyderabad.
6. Periodicals of India Journal of Medical Research
7. Indian Journal of Nutrition and Dietetics
8. Nutritional survey of India
9. A complete Guide to Vitamins - Edited by J.I. Rodale andStaff
10. Nutrition: Chaney and Ross
11. The complete Book of food and Nutrition - by J.I. Rodale and Staff
12. Food for revercing Heart Diseases Dr. bimal

CLINICAL NATUROPATHY

(Duration of study- 12 Months)

MAGNETOTHERAPY

1. Introduction to the Magnetotherapy
   a. Definitions of magneto therapy
   b. Historical highlights
2. Principles electromagnetism
3. Types of magnets
   a. Natural
   b. Artificial
   c. Permanent
   d. Electromagnets
4. Classification of magnets according to
   a. Power
   b. Shapes
   c. Clinical use
5. Physical properties of magnets
   a. Magnetic permeability
   b. Ferromagnetic materials
   c. Antiferromagnetic materials
   d. Paramagnetic materials
   e. Diamagnetic materials

6. Properties effects and corresponding features of north & south poles
7. Maintenance of permanent magnets
8. Modes of application of magnets
    a. General
    b. Local
    c. Different kinds of magnetic devices used in application of therapy
9. Magnetic charging , mechanism, dosage and its effect and limitations. (Water, oil, milk, honey)
10. General application – lead system of application
11. Magnetic therapy through shad chakras
12. Contraindications, complications, and limitations of magneto therapy.
13. Harmful effects of EMF and measures for minimizing it.

CHROMOTHERAPY

1. Introduction to the colour therapy
    a. Definition
    b. Historical highlights
2. Classification of colour
3. Electromagnetic spectrum
4. Relation of colours with shad chakras
5. Impact of colour sense on emotions and psychology
6. Therapeutic effect of colours
7. Heliotherapy
8. Photochemotherapy
9. Colour breathing
10. Chromo charging of water
11. Limitation and contraindications of chromo therapy
12. Research updating related to chromo therapy
13. Chromo diagnosis

STOOL &URINE DIAGNOSIS

1.Characteristics of Normal stool & urine - Abnormal characteristics and its significance.
3. Comparison of Stool and urine diagnosis with mala & moothrapareeksha in Ayurveda
4. Fantus Test
5. Bio Markers of Stool
6. Chromotherapeutic correlation to stool and urine colour

FUNCTIONAL/PREVENTIVE MEDICINE DIAGNOSTC METHODS

1. Annual Physical Blood work
2. Comprehensive stool tests
3. Apoptosis Assessment
4. Breath Test for Small Intestinal Bacterial Over Growth
5. Cell Signalling Analysis
6. Fatty Acid Profiling
7. Food Allergy/ sensitivity Test
8. Functional hormone testing
9. Genomics, Nutrigenomics & Nutrigenetics
10. Hair Mineral Analysis
11. Heidelberg pH capsule Gastric Analysis
12. Immune Function Assessment
13. Inflammatory markers assessments
14. Intestinal permeability Test

15. Lactose mal-absorption test
16. Oral Manifestation of Nutritional Sta
17. Rapid Dark Adaptation t
18. Urinary organic acid profil

SKIN DIAGNOSIS

1. Anatomy of sk
2. Skin typ
3. Abnormality and its significance in Heal
4. Comparison of skin diagnosis with twalpareeksha in Ayurve

TONGUE DIAGNOSIS

PULSE DIAGNOSIS

PRACTICALS

1. Case sheet writing - minimum 25 cases with naturopathic diagnostic metho
2. Regular hospital vis
3. Dissertation of at least 20 cases studies with significant and relevant Naturopath diagnostic modalities

REFERENCE BOOKS

1. The book of magnetic Healing by Roger Coghill
2. Magnet therapy – by Ghanashyamsingh Birla and Colette Hemlin
3. Color therapy - Jonathan Dee and Lesley Taylor
4. Healing with color –Theo Gimbel
5. The power of color – Dr.Marton Walker
6. Macfaddans encyclopedia of Physical culture by BernarrMacfadden
7. Asthangahridyam
8. Charakasamhitha
9. Susruthasamhitha
10. Pradeep MK. The Scientific Naturopath: A leap into the evidence behind naturopa philosophies. Bluerose Publishers, New Delhi, India. 2021. ISBN 978-93-5472-563-0.

PHYSIOTHERAPY

(Duration of study- 12Months)

1. Basic Physics in exercise therapy: -

Mechanics: Force, Gravity, Line of gravity, centre of gravity in human body, base. Equilibrium, Axes and planes.

Mechanical Principles: Lever, Order of Lever, examples in human body, Pendulum, Spring.

2. Introduction to exercise therapy: -

3. Starting Positions: - Fundamental starting positions, derived position, muscle work for all the fundamental starving 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, prevention of muscles 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 joints range of movements. Principles of mobilization of joint in increasing the range of motion. Technique of mobilization of stiff joint.

9. Relaxation: -

Techniques of relaxation, Principles of obtaining relaxation in various positions.

10. Posture: -

Types, factor responsible for good posture, factor for poor development of good posture.

11. Co-ordination exercises: - Definition of coordinated movements, in-coordinated movements, Principles of coordinated movements, technique of co-ordination exercise.

12. Gait:- Analysis of normal gait with muscles work,various Pathological gaints.

13. Crutch Gait:- Introduction, crutch measurement, various types of crutch gait (in details)

14. Neuro - muscular facilitation techniques, functional reeducation.

15. Suspension Therapy: - Principles of suspension, types of suspension therapy, effects and uses of suspension

therapy 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. Therapeutic Applications.

ELECTROTHERAPY :-

1. Electrical fundamentals, Physical principles, structure and properties of matter, molecular atom, proton, neutron, electron, ion etc.

Electrical energy: Nature of electricity current, static electricity current, electric potentials generated by cell ohm's law, Joule's Law.

Magnetic energy: Nature and property of a magnet, magnetic induction. Show rule.maxwel's cork-screw rule.Electro magnetic induction, principle and working of choke, coil, transformer, rectification of A.C. to D.C. Metal oxide rectifier, semiconductor, Diode and Triode, valves, principles of working in a capacitor, details of charging and discharging etc., Transistors, measurement of current intensity, EMS and power, moving coil millam meterand voltmeter.

2. Low Frequency Currents: -

Nature and principles of production of muscles stimulating currents,

Types of low frequency currents used for treatment. Therapeutic electric stimulation, Intephersis (Inntepheresis)

3. Preparation for electro therapy, preparation of apparatus, patient treatment technique

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

4. Faradic and Galvanic currents

2. **High frequency current treatments**: -
   Physics of high frequency currents, production of highfrequency currents, principles, Bio physics of heat, physiology of heat and cold. Production, Physiological andtherapeutic effects and uses.
   Technique of treatment,
   Dangers and precautions, contra-indications of the following:
   Shortwave Diathermy
3. Microwave Diathermy
4. Ultrasonic Therapy
   a. Principles of radiation therapy, physics of radiation therapy, laws governing radiation. Production, Physiological and therapeutic effects, uses, techniques of treatment, dangers and precautions, contraindications etc. of the following:
      i. Infrared radiation therapy
      ii. Ultraviolet radiation therapy
      iii. Basic principles of transcutaneous nerve stimulation and interferential therapy
   b. Wax therapy - physics - physiological and therapeutic effects and uses.
      Techniques of application.

PRACTICALS:(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

Uses of surged faradism and interrupted galvanism in various peripheral nerve lesions.

(a) Neuroproxia (b)Axonotimosis (c)Neurotomosis

PRACTICALS: (II)

2. (High Frequency current treatment)

(a) Shortwave diathermy - setting up of a apparatus including selection of method and electries. Technique preparation of patient, chocking, contraindications, 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 a apparatus including selection of method and electries, Techniquepreparation of patient, chocking contra-indications, application of SWD for various conditions and variousparts of the body. Those must be practiced by th estudents. (c) Ultraviolet radiation: Setting up of apparatus selection of lamps technique of application of UVR for various conditions like test dose, general body bath, acne vulgaris, alopacia areata and totalis, ulcers,psoriasis, rickets and general debility patients.
(d) Ultrasonics: Setting up of apparatus selection of dose, technique of application of various conditions and to various parts of the body.

PRACTICALS:

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 kneejoint in lower limbs for all movements. Demonstration of total suspension.
3. Muscle strength: Demonstration and practice of strengthening, re-education of weak / paralysed 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, elbowjoint, radio-ulnerjoint, wrist in upper limb.

   Demonstration and practice of free exercise to improve joint range of motion (Small joints, E.g. Hand, finger, toes etc.)

   Demonstration and practice of all crawling exercises, faulty posture, correcting techniques.

   Demonstration of various Pathological gaits.

   Measurement of crutches, walking, aids, strengthening of crutch muscles, crutch balance, demonstration and practice of all crutch gaits.

   Breathing Exercises: Demonstration and practice of Diaphragmatic breathing, localized expansion exercises. Passive Stretching: Techniques of passive stretching to sternomastoid muscle, shoulder abductors, flexors elbow flexors, supinator, wrist and finger flexors in upper limbs passive stretching to hip flexora, adductors, Ilio-tibial band, tensorfascialata, quadriceps, knee flexors, Tendoachillis etc.

BOOKS REFERENCE (BOTH THEORY AND PRACTICALS): -

1. Principles of Exercise therapy -by Dena Gardiner
2. Tidy Physiotherapy
3. Cast text book of Physiotherapy
4. Clayton's Electrotherapy and Actinotherapy

ACUPUNCTURE, ACUPRESSURE & REFLEXOLOGY

(Duration of Study – 12 Months)

THEORY

1. Introduction to Acupuncture.

a. Definition & History of Acupuncture.
b. Safety of Acupuncture
c. Indications & Contra indications of Acupuncture.

2. Basics of traditional Acupuncture

a. Yin & Yang theory.
b. Blood, Energy & Body fluids in Acupuncture.
c. Pathogenic factors in Acupuncture.
d. 5 Elements, Acupuncture points & meridians with anatomical locations.
e. Energetics in Acupuncture.
f. Energy Balancing points.
g. Rules for selecting Acupuncture points.
h. Basic terminologies in Acupuncture.
i. Needling techniques & Materials.

3. Moxibustion

a. Introduction methods, indications & contra-indications of Moxibustion.
b. Moxa cigar, Hot needle & Moxa box.

4. Cupping therapy

a. Introduction, methods, indications & contra-indications of cupping therapy.
b. Types of cupping therapy; Dry cup, Moving cup & Bleeding cup.

5. Basics of modern Acupuncture

a. Theories of pain control; (1) The gate control theory of pain (2) Endorphins releasing theory (3) Nitric oxide production by Acupuncture.
b. Effect of Acupuncture on motor function.

6. Segmental Anatomy & Acupuncture.

a. Introduction to segmentation & Metamerism.
    i. Role of peripheral nervous system in segmentation.
    ii. The role of peripheral autonomic nervous system in segmentation theory.
b. Dermatomes.
c. Myotomes.
d. Sclerotomes.
e. Enterotomes.
f. Conduction of impulses between segments.
g. Referred pain

7. Neuro- Acupuncture.

8. Auriculotherapy

9. Scalp Acupuncture.

10. Diagnostic methods in Acupuncture

1. Observation of body parts
2. Interrogation methods
3. Pulse diagnosis
4. Tongue diagnosis

11. Acupressure

1. What is acupressure Its origin & development.
2. Physiological effects of acupressure
3. Therapeutic uses of acupressure

12. Reflexology & Zone Therapy.

1. What is reflexology. history and development.
2. How does reflexology work Body & its reflex zones.
3. Applications, indications and central-indications
4. Preventive effects of reflexology.

13. Introduction, Methods of practice and benefits of Reiki & Pranic heali

PRACT1CALS: -

1. Demonstration of needling techniques and electro - stimulation, moxibustion.
2. Demonstration of Cupping techniques.
3. Demonstration of Acupressure, Reflexology & Zone therapy.
4. Each student should give treatment for at least 20 patients during the practical

REFERENCE BOOKS:-

1. Clinical Practicals of Acupuncture - byA.L. Agarwal
2. Clinical Acupuncture -by Dr. Anton Jayasurya
3. Principles and practice of Acupuncture - by Dr. J.K. Patel
4. Energetics in Acupuncture- by Radha Thambirajah
5. The segmental Anatomy- the key to master Acupuncture, Neural therapy and Manual therapy- by Ingrid Wancura-Kampik.
6. Acupuncture Anatomy- Regional micro anatomy & systemic Acupuncture networks- by Chang sok su.
7. Neuropuncture- A clinical handbook of neuroscience acupuncture- by Michael D Corradino.
8. Atlas of Acupuncture-Claudia Focks.

FIRST AID & EMERGENCY MEDICINE

(Duration of study : 12 Months)

SECTION A: **EMERGENCY MEDICINE**: A brief outline of the following

1. Introduction to Surgery.
2. Basic Surgical principles

(a) Surgical process
(b) Surgical History
(c) Clinical Examination
(d) Imaging
(e) Diagnostic Process

3. Wounds, Tissue, Repairs Scars

(a)' Wounds
(b) Tissue Repair
(c) Classification

- Acute Wounds
- Chronic Wounds

(d) Scars
(e) Magnematics

4. Accident and Emergency Surgery: Welfare Injuries
   a. Civil Injuries
   b. Triage
   c. Welfare Injuries: * Missile Injuries * Blast Injuries
   d. Replantation and Revascularisation
5. Acute Resuscitation and Support
   a. Fluid, Electrolyte and Acid - Base Balance
   b. Water Depletion
   c. Sodium Balance
   d. Sodium Excretion shut-down Trauma
   e. Sodium Depletion
   f. Sodium Excess
   g. Potassium Balance
   h. Hypokalaemia
   i. Alkalosis -
   j. Metabolic, Respiratory Alkalosis

Acidosis - Acidosis
(a) Parenteral Fluid Therapy
5. Hypovolaemia - Diagnosis & Treatment
6. Hypovolaemia & Cardiogenic Shock
7. Prevention of Organ Failure

ï,· Avoiding Tissue Hypoxia - Simple resuscitation with intravenous Fluids
ï,· Treating Tissue Hypoxia
ï,· Avoiding Nosocomial infections
ï,· Hemorrhage - Types of Haemorrhage Treatment
ï,· Blood Transfusion

13. Nutritional Support and Rehabilitation
    a. Nutrition - Malnutrition its effects, Assessment & Management.
        i. Methods of Feeding
        ii. Parental Nutrition, Monitoring Feeding Regimens
        iii. Rehabilitation
14. Anesthesia & Pain Relief
    a. Choice of Anesthesia - Topical, Local Infiltration, Regional (without General sedation)
    b. Preparation for Anesthesia - Investigation Starvation before surgery
    c. Pre-operative Drugs & Treatment
    d. Pain Relief in Surgery
15. Wound Infection
    a. Physiology & Manifestation
    b. Types of Infection
    c. Treatment
    d. Prophylaxis
    e. Classification of Wounds
    f. Principles of Antimicrobial Treatment
16. Burns and Management
17. Fractures and dislocations - General Principles of Management

Soft Tissue Injuries

18. Disorders of the growing skeleton & their Management Spinal Deformity, Neuromuscu Orthopedics, (Poliomyelitis, Cerebral Palsy Spinabifida) Angular & Torsional Deformities of the Legs
19. Sports-related Injuries & their Managemen

SECTION B -FIRST AID

1. General Principles of First Aid
2. Wounds, Control of hemorrhage, Epistaxis
3. Shock - Classification and treatment.
4. Dog bite, Snake bite, Scorpion sting, honey bees
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 , splintages , support 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 asthmaticus
3. Spontaneous pneumo thorax
4. Acute respiratory failure.

III. Gastro Intestinal System :-

1. Acute Vomiting.
2. Perforation of Peptic Ulcer.
3. Hemetemesis.
4. Hepatic Precoma and coma.

IV. General Nervous System: -

1. Unconscious patient.
2. Cerebro vascular catastrophes.
3. Convulsions
4. Status epilepticus

V. Renal System: -

1. Acute renal failure
2. Renal colic
3. Hemeturia

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

VIII. Obstetrics and Gynecology

1. Mother health
2. Child health

RECOMMENDED TEXT BOOKS: -

1. Hutchinson's clinical methods
2. Manual of Clinical Methods – By P.S. Shankar
3. Clinical diagnosis – By Jal Vakil
4. Clinical Methods – ByChamberlin
5. First Aid – By Red Cross Society
6. First Aid – By St. John Ambulance Association
7. First Aid – By L.C. Gupta and others
8. Bailey and love's short practice of Surgery.

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 of an ultra modern Super – specialty Hospital to see the latest techniques of modern.

RESEARCH METHODOLOGY & RECENT ADVANCES

Research Methodology

1. The research process. Methodology and methods.
2. The design of a study.
3. Literature review.
4. Ethics of research.
5. Types of common designs. Their advantages and disadvantages.
6. Sampling.
7. The experimental and quasi-experimental methods. Correlation studies.
8. Measurement tools: Observations, questionnaires and others.
9. Data organization in Excel and SPSS.
10. Descriptive statistics. Measures of central tendency, measures of dispersion. Correlation coefficients.
11. Graphical representations of data. Simple graphs, the box and whiskers plot.
12. Reliability. The different ways of measuring reliability.
13. Validity. Types of validity.

Inferential Statistics and Probability Theory

1. Inferential statistics – populations and samples.
2. Elementary concepts in probability theory
3. The normal distribution. Z-values and probability
4. Calculating probabilities when population parameters are known

Research Reports

1. Microsoft word, excel and power point
2. Reading research reports
3. Writing research reports
4. Presentations

Other streams

1. Inter-Disciplinary Research
2. Introduction to research in Management studies
3. Introduction to research in Education, History, and Anthropology.
4. Introduction to research in Social studies and Humanity.
5. Introduction to research in Linguistics
6. Introduction to research in Jurisprudence.
7. Introduction to research in Science and technology.

Practical

Dissertation on any one research study (basic or clinical with sample size of minimum 10). Presentation of dissertation.
Research paper interpretation and presentation
Single case study from hospital

Text Books:

Kothari, C.R.: Research Methodology, Methods and Techniques(VishwaPrakashan, New Delhi, 1985).
Telles, S.: Research Methods (Swami Vivekananda YogaPrakashan, Bangalore).

Reference:

1. Robin Monro: Yoga research bibliography scientific studies on Yoga and meditation(Yoga Biomedical Trust, England 1989)
2. Michael H. Cohen: Complementary and Alternative Medicine: Legal Boundaries and regulatory Perspectives (Paperback - Aug 19, 1997)
3. Jerrold H. Zar: Biostatistical Analysis person education.
4. Russell A. Jones: Research Methods in the Social and behavioral science (Sinauer Associates, Saunderland's Massachusetts)
5. 23.8.5 A.K. Singh: Tests, Measurements and Research Methods in Behavioral Sciences (BharatiBhavan Publishers)
6. 23.8.6 J.N.S. Matthews: An Introduction to randomized controlled clinical trials (Arnold, London)
7. 23.8.7 J.S.P. Lumley: Research:- Some Ground Rules W. Benjamin (Oxford University Press)
8. 23.8.8 Herman J. Ader: Research Methodology in the life, behavioral and social Sciences Gideon J. Mellebeegh (SAGE Publications).

COMPULSORY ROTATORY RESIDENT INTERNSHIP TRAINING fC.R.R.I.)

1. GENERAL OBJECTIVE :

internship, for a B.N.Y.S. graduate, is a phase of training wherein a graduate is expected to learn actual Practice of Health Care in terms of Naturopathy and Yoga therapy and acquire skills under supervision so that he / she may become capable of functioning independently.

2. SPECIFIC OBJECTIVES:

At the end of internship training, the student shall be able to :

i. Diagnose clinically common disease conditions encountered in practice and make timely decision for referral to higher level;

ii. Use discreetly the naturopathic treatment modalities, herbal preparations, emergency drugs and laboratory services;

iii. Treat effectively the disease conditions encountered in practice by suitable methods of Naturopathy and Yoga therapy under the direct supervision of Senior Medical Officers.

iv. Develop leadership qualities to function effectively as a leader of the health team organized to deliver the health and family welfare service in existing socio-economic, political and cultural environment;

v. Render services to the chronically sick and disabled (both physical and mental) and to communicate effectively with the patient and the community.

vi. Providing First Aid and emergency care until the patient reach the right place.

3. TIME DISTRIBUTION:

Time allocation to each discipline is approximate and shall be guided more specifically by the actual experience obtained.

COMPULSORY POSTINGS	DURATION
1. Nutrition, Fasting	: One month.
2. Massage, Aromatherapy, Chiropractic & Osteopathy.	: One month.
3. Hydrotherapy, and Clay therapy	: One month.
4. Acupuncture, Acupressure & Reflexology	: One month
5. Yoga therapy	: One month.
6. Diagnostic Methods in Naturopathy & Yoga & Modern Diagnostic Methods	: One month.
7. Obstetrics & Gynecology with Family Welfare Planning	: One month.
8. Community Medicine	: One month.
9. Minor Surgery, First Aid & Emergency Medicine	: One month.
10. Physiotherapy	: One month.
11. Psychology and Psychiatry	: One month.
12. Dietetics & Herbology	: One month

4. OTHER DETAILS:

1. AH parts of C.R.R.I., shall be done as far as possible in institutions within the Country, recognized for this purpose by the University.

2. Every candidate will be required after passing the Final B.N.Y.S. Examination to undergo C.R.R.I, to the satisfaction of college authorities and the Medical University for a period of 12 months, so as to be eligible for the award of (B.N.Y.S.) Bachelor of Naturopathy and Yogic Sciences, and Medical registration with Registrar-cum-Secretary Arunchal Pradesh Indian Medicine Council , Naharlagun (Arunchal Pradesh)

3. The University shall issue a Provisional B.N.Y.S. Pass Certificate on passing the Final Examination.

4. The Provisional Registration will be for a period of 1 year. In the event of shortage or unsatisfactory work, the period of Provisional Registration and the C.R.R.I, may be suitably extended by the Concerned Authorities.

5. The Intern shall be entrusted with clinical responsibilities under the direct supervision of Senior Medical Officers. They shall not be working independently.

6. Interns will not issue a Medical Certificate or a Death Certificate or a medico legal document over their signature.

7. In addition to the training in teaching hospital, the interns can utilize facilities in the sub centres and attached hospitals to the institution as well as campus, seminars, workshops. Continuing Medical Education, Conferences, etc. which is permitted by the college authority. The Interns should get a certification of satisfactory completion the authorities of attached hospitals, which will be countersign by college authorities.

8. Leave :- During the 12 months period of C.R.R.I., only 12 days leave is eligible.

9. Out of one year, 6 months should be trained in the college hospital (Teaching Hospital), the remaining 6 months can be allotted for the others attached hospitals and renowned Institutions in the country.

5. ASSESSMENT OF INTERNSHIP:

The intern shall maintain a record of work which is to be verified and certified by the Medical Officer under whom he works. Apart from scrutiny of the record of work, assessment and evaluation of training shall be undertaken by an objective approach using situation tests in knowledge, skills and attitude during and at the end of the internship.

Based on the record of work and periodic assessment of the Dean and the C.M.O., a certificate of satisfactory completion of training should be acquired from both, following which the University shall award the B.N.Y.S. degree. The graduate is then qualified for full registration with the State Board of Indian Medicine / Council.

Satisfactory completion of internship shall be determined on the basis of the following:-

i. Proficiency of knowledge - Score 0- 10.

ii. Competency in skills as acquired by . p

a) performing procedures

b. assisting in procedures

c. observing procedures - Score 0-10.

iii. Responsibility, punctuality, initiative follow-up reports; Research attitude;

Capacity to work on a team - Behavior with colleagues, nursing staff and relationship with paramedical staff, participation in discussion

Score 0-10.

Performance may be graded under each head as follows Poor / Below Average / Average / Above Average /Excellent

<3 < 5 <7& above 7 & above 9 to 10

An intern shall be required to have a minimum score of 5 in each of the three heads mentioned above failing which the concerned postings shall be taken as unsatisfactory. Each

area of unsatisfactory score (below5) shall result in the repetition of one third of the total period of posting in the concerned subject.

6. TRAINING IN EACH DISCIPLINE :

The guidelines in the implementation of the training programs are given below for each discipline :

(A) YOGA THERAPY

a. Yoga demonstration for the patients should be done in the Naturopathy teaching hospitals and attached Naturopathy hospitals.

b. Higher yogic practices like SMET, PET, Cyclic meditation, Omkara meditation, MEMT, etc. should be demonstrated to the patient.

c. Yoga kriyas should be taught and supervised to the patients.

d. Dissertation should be submitted for a particular disease, in terms of Yoga Therapy.

(B) NUTRITION, FASTING, DIETETICS & HERBOLOGY

a. Identification and calculation of nutrition values of fruits, vegetables, grains and recipes which are commonly used in the hospital for the patients. Calculation and recording the above said matter for the daily diet.

b. To prepare recipes for different diseases.

c. Identification of healing herbs.

d. Preparing and supervising decoctions, powders, kashayams, poultices, etc.

e. Dissertation / project work on diet therapy and fasting should be submitted for one disease.

f. Different kinds of fasting patients should be observed and recorded per patient should be done by the internees.

(C) ACUPRESSURE, ACUPUNCTURE AND REFLEXOLOGY

a. Acupuncture for minimum 25 patients should be given.

b. Acupressure should be given for different patients according to the prescription of the medical officer.

c. Dissertation on Acupuncture prescription should be submitted.

(D) MASSAGE, AROMATHERAPY, CHIROPRACTICE AND OSTEOPATHY

a. 5 full body massages and 5 partial massages should be given.

b. Instruct and supervise massages. Aromatherapy and Osteopathy, when the therapist apply to the patient.

c. Dissertation should be submitted for a disease in terms of Massage therapy, Aromatherapy, Chiropractic and Osteopathy.

(E) HYDROTHERAPY & CLAY THERAPY

a. Interns should supervise and give different hydrotherapeutic applications for various diseases.

b. Observations of change in vital datas before and after treatment should be recorded for each patient.

c. Dissertation should be submitted on one disease in terms of Hydrotherapy and Clay therapy.

(F) CHROMOTHERAPY & MAGNETOTHERAPY

a. Chromotherapy and Magnetotherapy treatments should be given or supervised.

b. Case presentation (one case per student).

(G) DIAGNOSTIC METHODS IN NATUROPATHY AND YOGA

a. The intern should evaluate and record the encumbrances of 25 cases.

b. Should evaluate 10 cases in terms of NABIPAREEKSHA and do various techniques of correction.

c. Evaluation and recording of 15 cases in terms of Iridiagnosis.

d. Submission of dissertation.

(H) **MODERN DIAGNOSTIC METHODS**

a. Detailed case sheet writing with recording of vital data, general and systemic examinations of patients in all allotted hospitals - 20 cases.

b. Supervision of urine analysis, stool examination, blood examination and biopsies.

a. Should learn urethral catheterization, proctoscopy, insertion of Ryle's tube, etc.

b. Should present 3 cases.

(I) COMMUNITY MEDICINE

a. Interns should visit to the District hospital, Taluk hospital and Primary health centres.

b. A student should know about the immunization against infectious diseases.

c. Participate in programs in prevention and control of locally prevalent endemic diseases including nutritional disorders.

d. Learn skills first hand in Family Welfare Planning procedures.

e. Learn the management of National Health Programs

f. Be capable of conducting a survey and employ its findings as a measure towards arriving at a community diagnosis.

g. Conduct programs on health education,

h. Gain capabilities of using audiovisual aids.

i. Acquire capability of utilization of scientific information for promotion of community health.

j. Provide health education to an individual / community on applied nutrition and care of mothers and children.

k. Participation in School heath programs.

I. Presentation of two different cases.

(J) MINOR SURGERY / FIRST AID EMERGENCY MEDICINE

An intern is expected to acquire following skills during his/ her posting:

a. Diagnose with reasonable accuracy all surgical illnesses including emergencies.

b. Resuscitate a critically injured patient and a severe burns patient.

c. Control surface bleeding and manage open wound.

d. Monitor patients of head, spine, chest, abdominal and pelvic injury.

e. Institute first-line management of acute abdomen.

f. Perform vene section.

g. Catheterise patients with acute urinary retention or perform trocar cystostomy.

h. Drain superficial abscesses.

i. Suturing of wound in nose / ear, injury to nose / ear, bleeding from nose / ear, airway obstruction, etc.

j. Miscellaneous conditions - like drowning, snake bites, arthropod bites, electrical injuries, heat strokes, cold injury, blast injury, acute dental conditions, etc.

k. Psychiatric conditions - acute status of mental illnesses.

(K) PHYSIOTHERAPY

a. Supervise and handle all physiotherapy equipments.

b. Supervise and give appropriate exercise depending upon the condition of the patient.

c. Help the medical officers in executing the treatments.

d. Case presentation of any one disease.

(M) PSYCHOLOGY AND PSYCHIATRY

Should asses and manage acute and chronic psychological illnesses and record should be submitted.

(N) OBSTETRICS AND GYNAECOLOGY

a. Diagnosis of early pregnancy and provision of antenatal care.

b. Application of Yoga & Naturopathy for early delivery.

c. Diagnosis of pathology of pregnancy and high risk pregnancy cases, referring to the nearest suitable place.

d. Management of normal labour and repair of perineal tears.

e. Conducting necessary examinations for detection of abnormality.

f. Detection and management of abnormalities of lactation, teaching natural methods for improving the Lactation.

g. To evaluate and prescribe contraceptive methods.

h. Maintaining the record of antenatal check-up and delivery cases attended in Obstetrics and cases in Gynecology