



MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

(From Academic Year 2012-13 & onwards)

Duration of course-Total 2 years (1st Year –one year, 2nd Year-One year)

Syllabus for Diploma Course in Ayurved

Syllabus for Rasayan and Vajikaran

[D. Geriatrics (Ay.)]

First Year

Number of theory lectures Approximately 100 period
Number of practicals (Clinics) 30 (approximately)

Theory exam marks	1st year- 200 marks
Practical Marks	1st year- 100 marks
Number of Theory Question Papers	1st year- 2 Papers (Paper-A, Paper-B)

Paper I

Part – A

RASAYANA SIDDHANTA

A. Fundamentals of Rasayana

- Historical evolution & concept of Rasayana (from vedic to contemporary)
- Source material related to Rasayana in various classics
- Synonyms, Utility, scope, etymology and definition of Rasayana.
- Present Scenario and future prospect in practice of Rasayana

B. Anatomy & applied physiology in context to Rasayana.

- Triguna, mahabhuta, Dosha, Dhatu, mala, Srotas, Agni, Ojas, Indriya and Mana.
- Brief Introduction to Ahara rasa Nirman, Dhatu Poshanakrama – kedari kulya, kshiradadhi, Khale kapota Nyayas and their role in Dhatu formation.
- Concept of Nutrition preservation of tissue health. Role of various nutrients like vitamins, Protein, Fats, Micronutrients and trace elements, in preservation and promotion of tissue health.
- Metabolism: General, pertaining to ageing
- Endocrinology : General, Growth related and ageing.
- immunity – Antigen antibody reactions, cell mediated and Humoral immunity, Immune responses, immune deficiency states, Hypersensitivity and autoimmunity.

C.

(a) Classification and application of Rasayana alongwith their types and examples

- Kutipravesnik, Vata tapika, Droni pravesnik
- Kamya, naimittika, Ajasrika
- Medhya
- Indriyanusari, Dhatvanusari
- Lekhan – Brimhanusari
- Sansodhan – Samsamananusari
- Swasthyanuvaritaka Rasayana – Achara Rasayana, Sadvritta, Brahmacharya

(b) Rasayan adharitav – Indications & contraindications

(c) Optimum time for the use of rasayana as per Age, Season, Day/Night etc.

- (d) Pathyapathya during and after the use of Rasayana
- (e) Methods of using Rasayana – Poorva, Pradhana and Paschat Karmas.

D.

(a) Preservation & Promotion of health by Rasayana

- (b) prevention of recurrence of Physical & mental disorders by Rasayana

E. Kutipravesik Rasayana

- a) Concept of Trigarbha Kuti and its descriptions
- b) Scope and limitation of kuti pravesika Rasayan
- c) Standard of operative procedures for kutipravesika Rasayana in general and specific to different rasayan usage.
- d) Duration of kutipravesik Rasayan and rules for termination of Kutipravesha
- e) Benefits of Kutipravesika Rasayana.

Part B

VAJIKARAN SIDDHANTA

Fundamental of Vajikaran

- a. Historical evolution & concept of Vajikarna (from vedic to contemporary era)
- b. Source material related to vajikarana in various classics
- c. Etymology, definition, Synonyms, Utility and scope of Vajikaran
- d. Epidemiology of sexual disorders and infertility – Indian and Global Scenario.
- e. Present scenario and Future prospects in practice of Vajikaran
- f. Cross cultural perspectives of Sexuality & fertility

B. Applied Anatomy & Physiology in context of vajikaran.

- a) Trigunas, Mahabhutas, Dosha, Dhatus, Mala, Srotas, Agni, Ojas, Indriya and manas
- b) Srotas with special reference to sukravaha srotas and Artavavaha Srotas Shukradhara kala
- c) Study of Beeja, Shukra, Veerya, Retasa and Rupadravya
- d) Dhatuposhan karma with special reference to Shukra formation
- e) Reproductive anatomy & Physiology – spermatogenesis, oogenesis
- f) Shuddha Shukra Lakshna, Falavata Shukra Lakshna, Shudha Artava Lakshna
- g) Process of fertilization, Factor responsible for Garbhotpatti.

C. Sexual behaviour & response

- a. Physiology of Erection, Ejaculation and Orgasam
- b. Hormonal regulation of human sexuality and fertility
- c. Metabolism : General and pertaining to sexuality and fertility

D. Types and Methods of Vajikarana

- a. Classification of Vajikarana
- b. When and which Vajikarana is to be used?
- c. Methods of Using Vajikarana – Poorva, pradhan and Paschatkarma
- d. Dietetic, Physical and behavioural code for using Vajikarana
- e. Contraindications for Vajikarana

PAPER II

Part – A

Jara Samprapti Vigyana (Ageing)

A. Concept of jara and ageing

- a. Introduction and definitions
- b. Epidemiology of Ageing and degenerative diseases

B. Causes of ageing

- a) Dosh, Dhatu, Agni Mala in Jara
- b) Age of onset of ageing different Ayurvedic & Modern concepts regarding onset of Ageing
- c) Factors of ageing process Swabhav, Jara, Kala,
- d) Prakruti & Ageing
- e) Environment & ageing process Swabhav, jara, Kala,

- f) Town Dwelling & Diet Articles such as Lavana, Kshara etc in Ageing.
- g) Effect of life style in ageing.
- h) Psychological factors in ageing – Ershya, Bhaya, Krodha, Chinta

C. Samprapti of jara

D. Roopa of jara – Srotonusari Rupa of jara

E. Epidemiology of ageing and degenerative diseases

F. Classification of jara-

- a. Reversible & Irreversible ageing process.
- b. Introduction to common geriatric disorders like – Dementia, Alzheimer's disease, Degenerative diseases, Stress induced diseases, falls, Urinary Retention, GIT problems, BPH, CVA, TIA, PVD, OA.

Part – B
VAJIKARAN

A. Concept of Vajikaran

- a) knowledge of different terms used in reference to Vajikarana – Vrishya, Vajikaran, Chatakavat, hastivat, Ashwavat, Apatyam, Santankarm
- b) Different types of Shukradushti and their symptoms
- c) Different types of Artavadushti and their symptoms

B. Diseases – panchanidan of diseases related to Shukravaha Srotas -

Klaibya, Shandya, napunshkata, Shukragatavata, Dhvajabhana, Vyavayashosha, Shighrapatan, Shukrataralya, Shukadosha

C. Sexual dysfunctions

- a. Libido related disorders – Increased Libido, Decresed Libido
- b. Erectile dysfunctions :- organic, Secondary to chronic diseases Functional, iatrogenic
- c. Ejaculatory disorders – premature, Delayed, Retrograde, Anejaculation

D. Infertility:

- a. Male infertility – Oligozoospermia, asthenozoospermia, Teratozoospermia, Obstructive Azoospermia, Immunological infertility, Pyospermia Female infertility

E. Introduction to Sexually transmitted diseases – Phiranga, Upadamsha, Puyameha, Syphilis, Gonorrhea, HIV/AIDS.

Second Year

Number of theory lectures	Approximately 100 period
Number of practicals (Clinics)	30 (approximately)

Theory exam marks	1st year- 200 marks
Practical Marks	1st year- 100 marks
Number of Theory Question Papers	1st year- 2 Papers (Paper-A, Paper-B)

PAPER I

Part – A

RASAYANA PARIKSHA VIGYAN

A. History taking & Clinical examination

- a. Rog and Rogi Pariksha, Trividha, Chaturvidha, Shadvidha, Ashtavitha, Dashavidha & Dwadoshvidha
- b. Neurological, ENT, Ophthalmological Examination.

B. Lab Investigations -

- 1. Routine Investigations –
Hb, TLC, DLC, ESR, Biochemistry (Blood Sugar, blood Urea, Creatinine, Uric acid, Lipid

- profile) etc.
- 2. Hormonal Assay –
Thyroid, Biomarker related to ageing.
- 3. Immunoglobulin studies
- 4. Enzyme studies
- 5. Radiological & Sonological Investigations
- 6. Specific Investigations for ageing.

C. Importance of Sanshodhana in Rasayan

Role of importance of Shodhanakarma in Rasayan, Knowledge of difference procedures useful in Rasayan

D. Psychosocial Assessment

- a) Personality assessment & development in Relation with Rasayana.
- b) Different Scales for assessment of IQ, Memory, EQ
- c) Anxiety & depression scale
- d) MME Scale
- e) Quality of life parameters
- f) positive Psychology assessment
- g) Counseling techniques

Part – B

VAJIKARAN PARIKSHA VIGYAN

A. History taking and examination

- a) History – General and Sexual
- b) physical examination
- c) General Examination
- d) Neurological and Vascular
- e) Specific Examination – Sexual examination – Local examination of testes, Penis, Vas, Spermatic Chord
- f) Nocturnal penile tumescence (NPT) Examination

B. Investigations

Lab Investigations -

- 1. Routine Investigations -
HB, TLC, DLC, ESR, Biochemistry (Blood Sugar, Blood Urea, Creatinine, Uric acid, Lipid profile) etc.
- 2. Hormonal Assay –
Thyroid, Testosterone, FSH, LH, Prolactin etc.
- 3. Immunoglobulin studies
- 4. Enzyme studies
- 5. Genetic mapping, Chromosomal Analyses
- 6. HIV, VDRL, HBSAg etc.
- 7. Semen analysis (Semenogram)

Radiological & Sonological Investigations

Scrotal Doppler, Penile Doppler, Scrotal USG

C. Importance of Sanshodhana in Vajikaran and knowledge of individual Karmas useful in Vajikaran

D. Myths and Misconcepts about Sex and Vajikarana

- a. Classification of Males and Females as per Kamashastra
- b. Knowledge of different organs of Sensuality and achieving orgasm.

E. Sex Education

- a) Counseling Techniques
- b) Marriage sex counselling

- c) Concepts of safer sex-Knowledge of Pharmacology of male & Female contraceptives
- d) Reproduction, contraception
- e) Decision making about pregnancy & parenthood
- f) Ayurvedic & Modern concept of genetic defects leading to malformation of secondary sexual factors

F. Ethics & legal aspects of sex & reproduction

PAPER II

Part – A

RASAYANA AUSHADHI VIGYANA

A.

(a) Brief Introduction to Rasayana Drugs – Jivaneeya, Brihaniya, Balya, Shramaha & Vayasthapana

(b) Pharmacology and Pharmacodynamics of Ayurvedic Rasayana Drugs.

B. Classification of Rasayana Drugs -

- a. Vyadhyutapadpratibandhakrasayan Drugs
- b. Vyadhibala virodhakarashyan Drugs
- c. Medhyarasayan Drugs
- d. Vatatapikarasayan Drugs
- e. Naimittikrasayan Drugs for Specific diseases
- f. Svarna Prashana Rasayana
- g. Knowledge of Single Herbal drugs used as Rasayana
- h. knowledge of Herbominerallo-metalic and Acqua Marine compounds used as Rasayana
- i. Knowledge of Compound formulation mentioned in Ayurveda
- j. Knowledge of Drugs -
Used in Kutipravesika Rasayana
Used in Vatatapika Rasayana
- k. Adravya Rasayana : Application & Importance of Achara Rasayan in today's scenario.

C. mode of action of Rasayana

D. methodology of deciding the drug, dose, dosage form, Anupana, pathya, Apathya for Rasayan karma

E. Management

- a. Management of Jara and Akaljara
- b. Management of Immune deficiency disorders
- c. Management of Metabolic and endocrine disorders
- d. Management of life style disorders
- e. Management of degenerative disorders
- f. management of pollution and toxicity related disorders
- g. Symptomatic treatment of kala jara
- h. Proccedures contraindicated in Jara
- i. Rasayana useful in different branches of Ayurveda
- j. Rasayana Drugs used in Contemporary & other allied medical sciences eg. Chines – Ginseng, Ginkoga Biloba

F. Prevention or Delaying of Jara – According to the stages

G. Modern prospective of Rasayana

Immunomodulator, Anti oxidants, tissue supplements nootropics, Disease Modifying anti Arthritics drugs, Prebiotics, Probiotics, Nano-Bio technological products etc.

H. Recent advances in Rasayana

I. Research methodologies in Rasayana

Part – B
VAJIKARANA AUSHADHI VIGYAN

A. Classification of vajikarana Drugs –

Vajikar, Vrishya, Chatkvat, Hastivat, Punsatvakar, Apatyasantankar, Shukrajanak, Shukrapravartak, Shukrajanakparvartak, Shukrasrutikar, Shukravridhdikar, Shukrasrutivridhdikar, Shukrastmbhaka, Shukrarechak, Shukrashosaka

- a. Single Herbal drugs used in Vajikaran and their efficacy
- b. Herbomineralo-metalic and Acqua marine compounds used in Vajikaran their efficacy
- c. Compound formulations mentioned in Ayurveda as Vajikar
- d. Detailed Study of Vajikaran Yogas
 - i. Drugs Used in male infertility
 - ii. Drugs used in Female infertility

B. Management

Management of sexual dysfunctions with Vijakaran Dravyas.

Invasive & noninvasive procedures in Vijakaran

Uttarbasti- Its indication and contraindication, method drugs used, precaution, complication

Application of Panchkarma in infertility management

Surgical procedures & implants in Vajikaran

Management of male & female infertility

Assisted reproductive techniques (IVF, IUI, ICSI, GIFT, ZIFT, etc.)

Use of Vajikaran drugs in different branches of Ashtanga Ayurveda.

Vajikaran Drugs used in contemporary & other allied medical sciences eg. Chines, Ginseng etc.

C. modern perspectives of vajikaran

Aphridusuace

Punsavan Karma – Gender Selection legal aspects of sex & reproduction

D. Recent advances in Vajikaran

Research Methodologies in vajikaran

Details of Question Paper :-

For First Year & Second Year ,There shall be Two Theory papers of 100 Marks each.

Section A –(50 marks)

Q.No.	Nature of Question	Division of Marks	Total Marks
1	Long Answer Question	1 X 15	15
2	Long Answer Question	1 X 15	15
3	Attempt four SAQ out of five a) b) c) d) e)	4 x 5	20

Section B –(50 marks)

Q.No.	Nature of Question	Division of Marks	Total Marks
1	Long Answer Question	1 X 15	15
2	Long Answer Question	1 X 15	15
3	Attempt four SAQ out of five a) b) c) d) e)	4 x 5	20

Scheme of Practical -

For First Year & Second Year, There shall be 100 Marks Practical Examination For each Year.

Sr. No.	Heading of Practical	Marks
01	One long case	15
02	One short case	15
03	Laboratory Examination	10
04	Panchakarma Procedures	20
05	Journal A) Rasayan B) Vajikaran	10 10
06	Viva – Voce / Oral	20
Total		100

Guidelines for Project Work :-

- A.** The subject of the project work shall have relation with the subject matter of the specialty.
- B.** The subject of project work shall be practical orientated, and helpful in the development of competence in the respective specialties.
- C.** Student have to submit the project work on the subjected allotted by the Guide, in the last six months of second year.

Reference Book

Sr. No.	Name of Book	Author
1.	Vajikarana Tantra – English (Reproductive medicine in Ayurveda)	Dr. J.L.N. Sastry & Dr. K.nishteswar
2.	Aphrodisiacs and treatment of Importance in Alternative systems of medicine – English	Dr. P.V.V. Prasad, Mohd. Siddeq & Dr. Abdul Wadood
3.	रतिज रोग शास्त्र (भाग प्रथम व द्वितीय)	डॉ. शिव कुमार शास्त्री
4.	संतति निग्रह	डू. शिवदयाल गुप्ता
5.	कामशास्त्र अन्तर्गत वाजीकरण विज्ञान	प्रोफेसर ज्योतिर्मित्र
6.	आयुर्वेदीय रसायनसार	डॉ.शैलजा श्रीवास्तव
7.	रसायन सार (भाग प्रथम व द्वितीय)	डॉ. श्यामसुन्दर आचार्य
8.	रसायन खण्ड	डॉ. इन्द्रदेव त्रिपाठी
9.	रसायन तन्त्र	डॉ. पक्षधर झा
10.	आयुर्वेद चिकित्सा विज्ञान (भाग द्वितीय)	प्रो. बनवारीलाल गौड