

**DETAILED SYLLABUS FOR THE POST OF PHARMACIST Gr. II  
(SIDDHA) IN INDIAN SYSTEM OF MEDICINE - Direct Recruitment**

**(Cat.No: 719/2022)**

S. No	Module	Subject	Marks
1.	1	Fundamentals of Siddha System Medicine	10
2.	2	Anatomy	5
3.	3	Physiology	5
4.	4	Basic Pharmacology	10
5.	5	Pharmacy, Pharmacognosy & Instrumentation	10
6.	6	Siddha Pharmacology 1	15
7.	7	Siddha Pharmacology 2	15
8.	8	Siddha Pharmaceuticals	10
9.	9	Siddha Toxicology 1	10
10.	10	Siddha Toxicology 2	10
		Total	100

**Module 1 (10 Marks)**

**Fundamentals of Siddha System of Medicine.**

I. Determination of visible and invisible things (Porul Nirnayam Aruva, Aruruva, Uruva porul Nirnayam)

II. Three humoral theory (Uyir Thathukkal)

- Vali, Azhal and Iyam

Predominant locations - Properties - Physiological functions- Abnormal functions-Increased and decreased features - Classifications- Temperament (Thegi)

III. Seven Physical constituents (Udal Kattukal)

- Description about 7 physical constituents i.e. Normal function – increased and decreased features.

IV. Eight methods of diagnosis.

V. Definition and description of the following

- |   |  |
|---|--|
| 1.Pathiyam (Prescribed diet)                                | 2. Pattini (Fasting therapy)             |
| 3.Pattru (Plaster)  | 4. Thokkanam<br>(Physical manipulation)  |
| 5. Ottradam (Foementation)                                  | 6. Rasavatham (Alchemy)                  |
| 7.Muppu   | 8.Kayakalpam (Elixir Science)            |
| 9.Bethi Maruthuvam (Purgative therapy)                      | 10.Vanthi maruthuvam<br>(Emetic therapy) |
| 11.Vethu (Steam or aromotherapy)                            | 12.Idumarunthu (Philters)                |
| 13.Nanju (Poisons)  | 14.Vehangal (Natural urges)              |
| 15.Oppurai, Ethirurai, Kalappurai (Principles of treatment) |  |

VI. Thathuvas (Composition of the body and their enumeration and activities of 96 thathuvas)

VII. History of 18 Siddhars

VIII. Astanga Yogam

## **Module 2**

### **Anatomy (5 Marks).**

I.General Introduction: Introduction to anatomical terms both structural and functional.

II Skeletal system: Structure of the Bone tissue. Types of Bones - Enumeration of Bones in the human being, Cartilages, Joints, Types of Joints with prominent examples.

III Muscular system: Types of muscle namely skeletal, smooth and cardiac and their formation (origin, insertion, nerve supply and blood supply of upper limbs, lower limbs chest and abdomen)

IV. Cardio Vascular system: An introduction to heart, its position and structure - Arteries and veins, their structure difference between the two structurally principal arteries and veins and nomenclature of predominant ones and a bird's view on Lymphatic system.

V. Respiratory system: An introduction to the structures of the principal organs of the respiration namely, Lungs, Pleura, Mediastinum, Larynx, Trachea, Bronchi, Nose, Sinuses etc.

VI Digestive system: An introduction to the structures of the oral cavity, salivary glands, teeth, tongue and pharynx, esophagus, stomach, duodenum, small & large intestines, rectum, Pancreas, Liver, Gallblader, etc.

VII. Excretory system: An introduction to the structures of Abdominal urinary organs & Pelvic urinary organs.

VIII. Nervous system: An introduction to the structures of Neuron tissue, Basic structure of brain & Spinal Cord, Enumeration of Cranial nerves, Introduction to Sympathetic & Para sympathetic nervous system and basic knowledge of structures of the five sense organs.

IX. Reproductive System: An introduction to the structures and location of the various male and female reproductive organs viz. testes and paraphernalia, Ovaries and paraphernalia, mammary glands etc.

X Integumentary system: An introduction to the structures of skin and its appendages

XI. Introduction to Varma / Marma: Location, Size, Types etc in brief.

### **Module 3**

#### **Physiology ( 5 Marks)**

1 General Physiology: 96 Thathuvam - Introduction-7 Udal thathus formation- Brief description.

#### **II BLOOD**

Functions of blood - Properties of blood- Composition of blood-Plasma protein- Formation and Fate of RBC - Leucocytes-Immunity-Platelets and Coagulation- Blood Groups

#### **III Neuro Muscular Physiology**

Classification and structure of skeletal muscle- Properties (Factors that affecting force of contraction, muscle tone, Fatigue, Tetanus, Red muscle Pale muscle Neuromuscular junction and Neuro muscular blocker-motor unit.

#### **IV Cardiovascular System:**

Heart-Cardiac Cycle - Cardiac output - Heart sounds - Pulse - CVS and RS changes during muscular exercise, Blood Pressure Brief description of Naadi-  
vanations in disease

V Respiratory system: Physiological Anatomy Respiratory movement Exchange and transport of Respiratory gases - Volumes & Capacities - Introduction to Pranayama Kosam with Brief description on Pranayama, Pooragam, Kumbhagam & Resagam & Pranayama

VI Digestive system-Digestive tract-Salivary secretion- Gastric secretion- Liver Secretion-Pancreas Secretion- Small intestine secretion- Large intestine secretion- Digestion and Absorption of Food stuffs- Brief description on Food Constituent, samana, Raso, Thamo Guna foods. Relationship between Pancha boothas-Taster & Trithathuvas

VII Excretory system- Kidney-Nephron-Glomerular Filtration -Tubular function- Renal function test -Skin and body temperature.

VIII Endocrine system: Normal Activity of Pituitary. Thyroid, Para Thyroid, Suprarenal and Pancreas.

IX Reproductive system: Male-Structure-Hormone and Gametogenesis, Female Sex hormone structure Reproductive cycle menstrual cycle Pregnancy-Lactation contraception, infertility.

X. Nervous system: Neuron-Degeneration and Regeneration of nerve fibre-receptor synapse Neuro transmitter- Reflex-Pain-Functions of Cerebral cortex Pyramidal tract, Extra pyramidal tract, Cerebellum and Brain stem

Brief Introduction of Vingnana maya kosa, Arivu, Antha Karanam, Aatharam, Arathai, Dasanadi-Dasa vayu -14 Reflexes

## **Module 4**

### **Basic Pharmacology (10 Marks)**

1. Internal Medicine 32, External Medicine 32
2. Medicine: Definition & Classification
3. Relation between Panchabothams and Marunthu
4. Thogai Charakkugal
5. Dispensing Pharmacy
6. Medicine Quality

## 7. Infrastructure of Pharmacy

### Module 5

#### Pharmacy, Pharmacognosy & Instrumentation (10 Marks)

### I PHARMACY

#### Hospital and Clinical Pharmacy

1. Organization & Structure: Organization of a hospital, hospital pharmacy, Responsibilities of a hospital pharmacist, Pharmacy & Therapeutic committee, Budget preparation & Implementation.
2. Hospital formulary: Contents, preparation & revision of hospital formulary
3. Drug store management and inventory control:
  - a) Organization of drug store, types of materials stocked and storage condition
  - b) Purchase & inventory control, Principles, Purchases procedures, Purchase order, Procurement & Stocking.
4. Drug distribution system in Hospital
  - a) Outpatient dispensing & methods adopted.
  - b) Dispensing of drugs to inpatients, types of drug distribution systems, charging policy labeling.
  - c) Dispensing of drugs to ambulatory patients.
  - d) Dispensing of controlled drugs & dosage forms.
5. Central sterile supply unit & their management: Types of materials for sterilization, packing of materials prior to sterilization, sterilization of equipments and supply of sterile materials
6. Manufacture of sterile and Non-sterile products: Policy making of manufacturing items, demand, costing, personnel requirements, manufacturing practice, master formula care, production control & manufacturing records,.
7. Records and Reports: Prescription filling, drug profile, patient medication profile cases on drug interaction and adverse drug reactions, idiosyncratic cases, etc
8. Medicine preparatory unit, RDS of Siddha Drugs

## **II PHARMACOGNOSY:**

- General Principle of cultivation and collection of herbs
- Advantage and disadvantages of cultivation
- Factors influencing cultivation of medicinal plants, types of soils.
- Processing, storage, preservation of raw drug
- Quality control of Raw drugs
- Carbohydrate and its derived products agar. gum, acacia. Pectin, starch. gum tragacanth, honey, Isapgol
- Tannin- Gambier, Black catechu, gall, Tannic acid
- Lipids-Castor oil, Neem oil, gingelly oil, coconut oil
- Protein Gelatin, Spirulina
- Volatile oil-Mentha, Coriander, Cinnamom, Clove, Dill, Fennel Cardamom, Lemon grass, Eucalyptus, Sandal wood
- Saponin - Liquorice, Ginseng. Anthraquinone, cathartics, Aloes, Senna

## **III. INSTRUMENTATION:**

Modern Instrumentation: Disintegrator, Micro Pulverizer Pill-Cutting Machines, Tablet Compression Machine, Capsule filling Machine, Ointment making Machine, Syrup making Machine, Ball Mill, Tray Dryer, Mass mixer, Planetary mixer, Sieve shaker. Juice Expeller.

How to manage and maintenance of the Instruments. Equipments & Machines,

### **Karuvikal:**

Kalvam. Surendy, Agal, Salagai, Moosal. Seelai, Varatty, Sand, Fire wood, Pudam, Adupu, Thuruthi. (for Parpam/Bhasma / Kushtha & Siddha.Medicines)

### **Eyanthirangal:**

Avieyanthiram, Thula eyanthiram, Sudar thyla karuvi, Chenduram Erikum Karuvi, Padhanga Karuvi. Valuga enthiram Thiravaga valai enthiram.

## **Module 6**

### **SIDDHA PHARMACOLOGY-I (15 Marks)**

S.NO.	SIDDHA NAME	BOTANICAL NAME
1.	Naabi	<i>Aconitum napellus</i> Linn
2.	Vasambu	<i>Acorus calamus</i> Linn
3.	Adathodai	<i>Adathoda vasica</i> Nees
4.	Vellaipoondu	<i>Allium sativum</i> Linn
5.	Vengayam	<i>Allium cepa</i> Linn
6.	Akrakaram	<i>Anacyclus pyrethrum</i> Linn
7.	Thanneer vittan kizhangu	<i>Asparagus racemosus</i> Willd
8.	Neermulli	<i>Astracantha longifolia</i>
9.	Palasu	<i>Butea monosperma</i> Linn
10.	Mudakkathan	<i>Cardiospermum helicacabum</i>
11.	Nilaavaral	<i>Cassia angustifolia</i> Vahl
12.	Elumichai	<i>Citrus lemon/ Citrus acida</i>
13.	Nervalam	<i>Croton tiglium</i>
14.	Jeeragam	<i>Cuminum cyminum</i> Linn
15.	Manjal	<i>Curcuma longa</i>
16.	Korakizhangu	<i>Cyperus rotundus</i> Linn
17.	Elam	<i>Elettaria cardamomum</i>
18.	Nellikai	<i>Emblica officinalis</i>
19.	Perungayam	<i>Ferula asafoetida</i>
20.	Athimathuram	<i>Glycyrrhiza glabra</i> Linn
21.	Neeradimuthu	<i>Hydnocarpus laurifolia</i>
22.	Vallarai	<i>Centenella asiatica</i>
23.	Avuri	<i>Indigofera tinctoria</i> Linn
24.	Poonaikali	<i>Mucuna pruriens</i> Hook
25.	Thulasi	<i>Ocimum sanctum</i>
26.	Thippili	<i>Piper longum</i> Linn
27.	Kodiveli	<i>Plumbago zeylanicum</i>
28.	Karpoga arisi	<i>Psoralea corylifolia</i> Linn
29.	Masikkai	<i>Quercus infectoria</i> Oliv
30.	Costum	<i>Saussurea lappa</i>
31.	Serangkottai	<i>Semicarpus anacordium</i>
32.	Sitramutti	<i>Sida cordifolia</i>
33.	Parangipattai	<i>Smilax chinensis</i> Linn
34.	Etti	<i>Stychnos nuxvomica</i>
35.	Kadukkai	<i>Terminalia chebula</i> Retz
36.	Thantrikkai	<i>Terminalia belerica</i> Roxb
37.	Seendhil	<i>Tinospora cordifolia</i> Miers
38.	Vendiyam	<i>Trigonella foenum graecum</i> Lin
39.	Amukura	<i>Withania somnifera</i>
40.	Vetpalai	<i>Wrightia tinctoria</i>
41.	Inju/sukku	<i>Zingiber officinale</i> Roseae

42.	Nirungimul	Tribulus terrestris
43.	Arugampul	Cynodon dactylon linn
44.	Chiru peelai	Aerva lanata
45.	Impural	Oldenlandia umbellata
46.	Kalappai kizhangu	Gloriosa superba
47.	Kuppaimeni	Acalypha indica
48.	Nilavembu	Andrographis paniculata
49.	Pirandai	Cissus quadrangularis
50.	Thetran	Strychnos potatorum

## Module 7

### SIDDHA PHARMACOLOGY – II (15 Marks)

Ayam	Pavalam	Rasam
Karuvangam	Sangu	Lingam
Chembu	Kasthuri	Pooram
Nagam	Korosanai	Veeram
Manduram	Kombarakku	Ganthagam
Kavikkal	Palakarai	Thalagam
Annabedi	Patchai karpooram	Muthu chippi

1. Sangu Purification	6. Annabedi Chenduram	11. Vellai Ennai
2. Pooram Purification	7. Padigalinga Chenduram	12. Jathi Sambira
3. Nandukkal Parpam	8. Kavikkal Chooranam	Kulambu
4. Pinda Thylam	9. Karpoorathy Chooranam	13. Vanga Virana
5. Mathan Thylam	10. Thalaivali Pasai	Kalimbu
		14. Ganthaga Rasayanam
		15. Amirtha Vennai

## Module 8

### SIDDHA PHARMACEUTICALS (10 Marks)

#### I PHARMACEUTICS

KUDINEER: NEERMULLI, NILAVEMBU

VENNAI : KUNGILIA VENNAI

ILAGAM : AMUKKARA, PANCHADEEPAKNI

ENNAI : MOOLAKUDORA, ARUGAN THYLUM



CHLOORANAM: THALISATHY, PARANGIPATTAI, NILAVAGAI  
VADAGAM: INJI  
MANAPAGU: NANNARI, ADATHODAI  
KALKAM : KEELANELLI  
MATHIRAI: SWASA KUDORI

## Module 9

### SIDHA TOXICOLOGY: I (10 Marks)

#### SIGNS AND SYMPTOMS OF PLANT POISON AND THEIR ANTIDOTES

1. Purification of Drugs
2. Poisonous Toxic Symptom
3. Antidote

1	Nervalam	Croton tiglium
2	Serankottai	semiecarpus anacardium
3	Kodiveli	Plumbago zeylanica
4	Nabi	Aconitum napellus
5	Oomathai	Datura alba
6	Etti	Strychnos nux vomica
7	Kalappai Kizhangu	Gloriosa superb
8	Ganja	Cannabis sativa
9	Kundri mani	Abrus Precathorius
10	Abini	Papaver Somniferum
10	Arali	Neerium Odorum

## Module 10

### SIDHA TOXICOLOGY: II (10 Marks)

#### SIGNS AND SYMPTOMS OF METAL AND ANIMAL POISON AND THEIR ANTIDOTES

1. Purification of Drugs

2. Poisonous Toxic Symptom

3. Antidote

1) Mirthar Singi	6) Pooram	11) Karchunnam
2) Thalagam	7) Veeram	12) Karpooram
3) Ganthagam	8) Chembu	13) Scorpion bite
4) Rasam	9) Vangam	14) Snake bite
5) Lingam	10) Thurusu	15) Bee bite

***NOTE: - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper***