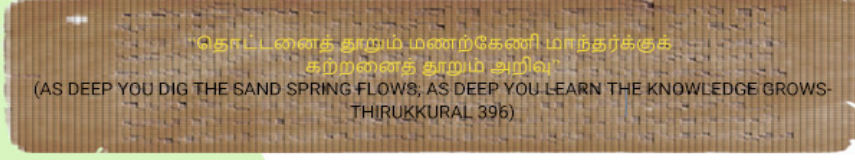


Course curriculum for Second Professional (B.S.M.S)

(PRESCRIBED BY NCISM)



Bachelor of Siddha Medicine and Surgery (B.S.M.S)

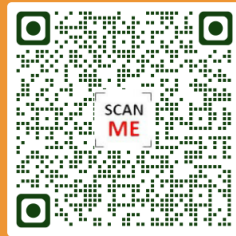
(SUBJECT CODE : SIDUG – GMK)

**Gunapadam - Marunthakaviyal (Materia Medica-
Pharmaceuticals) Paper I & Paper II**

(Applicable from 2021-22 batch, from the academic year 2023-24 onwards for 5 years or until further notification by NCISM, whichever is earlier)



॥ आयुषे सर्वलोकानाम् ॥



NCISM_II BSMS_

**BOARD OF UNANI, SIDDHA AND SOWA-RIGPA
NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE
NEW DELHI-110058**

II Professional Siddha Maruthuva Arignar (B.S.M.S)

Subject Code : SIDUG – GMK

Summary

Total number of Teaching hours: 400			
Lecture hours(LH)-Theory		120	120(LH)
Paper I	60		
Paper II	60		
Non Lecture hours(NLH)-Theory		280	280(NLH)
Paper I	42		
Paper II	42		
Non Lecture hours(NLH)-Practical			
Paper I & II	196		

Examination (Papers & Mark Distribution)					
Item	Theory Component Marks	Practical Component Marks			
		Practical	Viva	Elective	IA
Paper I	100	100	20	10 (Set-SB)	20
Paper II	100				
Sub-Total	200	150			
Total marks	350				

Important Note:-The User Manual II B.S.M.S is a valuable resource that provides comprehensive details about the curriculum file. It will help you understand and implement the curriculum. Please read the User Manual II before reading this curriculum file. The curriculum file has been thoroughly reviewed and verified for accuracy. However, if you find any discrepancies, please note that the contents related to the MSE should be considered authentic.
In case of difficulty and questions regarding curriculum write to cur.imp@ncismindia.org

PREFACE

Nowadays people are looking for better alternatives in Health and Wellness which is evident through the available data that says nearly 80% of the World population is utilizing Traditional & Complementary medicines for their health needs. In accordance with the fast-moving and ever-updating Medical field in which evidence-based theories and methods are the need of the hour, revamping and updating the syllabus becomes essential. Considering the vital role and without deviating from the roots of our Traditional Siddha Medicine, importance is being given to sensitizing the students on the contemporary trends and developmental skills in Marunthakaviyal (Pharmaceuticals).

A thorough brainstorming and extensive discussion regarding the existing syllabus for Marunthakaviyal were carried out by the subject experts and HSET experts through online and physical meetings. The strengths, shortcomings, and difficulties were tabulated. Based upon the consensus arrived, the following syllabus was framed with full justification.

This new regulation has given due consideration to the fact that universally the role of B.S.M.S –II Prof will undergo continuous evolution from ‘Dispenser of Medicines’ to ‘Medicine Expert’ in the multidisciplinary health care team for attaining enhanced learning experiences by the students. Accordingly, the existing education regulations have been revisited and compared with the present and future needs of the society.

The introduction of ‘Pharmacotherapeutics’ is one of the revolutionary changes in the new curriculum, that will help the students to hone their knowledge and skills in the area of pharmaceutical services which will certainly redefine the roles of the qualified Siddha Physicians in both community and hospital settings. So, students will attain the following professional competencies while going through the course module.

- Review and Dispense Prescriptions
- Expertise in Medications
- Proficiency in drugs and expertise in medications
- Deliver Primary and Preventive Healthcare
- Professional, Ethical, and Legal Practice
- Continuing Professional Development

Being an innovative syllabus incorporating all the essential aspects of traditional and contemporary methods, students will be fully benefitted to emerge into efficient and confident Siddha practitioners and entrepreneurs.

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Course Code and Name of Course

Course code	Name of Course
SIDUG–GMK	Gunapadam - Marunthakaviyal (Materia Medica-Pharmaceuticals) Paper I & Paper II

Table 1- Course learning outcomes and matched PO

SR1 CO No	A1 Course learning Outcomes (CO) SIDUG – GMK At the end of the course SIDUG – GMK, the students should be able to-	B1 Course learning Outcomes matched with program learning outcomes.
CO1	Demonstrate the application of Panchabootha theory, Suvai, Thanmai and Pirivu in Siddha Pharmaceuticals.	PO2
CO2	Illustrate knowledge about Pharmacy premises (Infra structure), requirements, GMP regulations, Dispensing pharmacy, Modern instrumentation, Drugs and cosmetics act for the establishment of Pharmacy unit to become Entrepreneur in Siddha Pharmaceutics.	PO1,PO12
CO3	Prepare 32 types of Internal and External Siddha medicines, Siddha elixir (Muppu) and Siddhar Rasavatham (Alchemy) as per standard protocols, incorporating Siddha instruments and Alavaigal (Siddha metrics).	PO1,PO5,PO10
CO4	Evaluate the Safety and Efficacy of Siddha medicines by Quality Control (QC) equipments, Drug standardization methods and Reverse pharmacology.	PO1,PO9
CO5	Appraise innovation, research, IPR related to Siddha unique formulations and cosmetics by applying the basic principles of drug preparation.	PO11,PO12
CO6	Justify the role of diet regimen (Pathiyam), vehicle and adjuvant for proper drug administration.	PO1,PO7
CO7	Discuss the role of advanced technologies like Nanomedicine, Pharmacogenomics and allied branches in Siddha pharmaceutics.	PO1,PO9,PO12

Table 2 : Contents of Course

Paper 1					
Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
1	<p>1. Pharmacy</p> <p>1.1. Marunthu Sei Nilayam (Pharmacy): Introduction, Raw drug store (RDS), Preparation section, Prepared medicine store (PMS) as per Siddhar Theraiyar quotes.</p> <p>1.2. Rules and Regulations of Pharmacy: Good Manufacturing Practice (GMP) guidelines and Good storage practice (GSP)</p> <p>1.3. Dispensing Pharmacy: (i)Prescription writing, (ii)Medical abbreviations: 1)o.d 2) b.i.d 3) t.i.d 4) q.i.d 5) q.a.d 6) q.a.m 7) q.p.m 8) q.h 9) q.q.h 10) q.1.h 11) q4pm 12) h.s13) p.c. 14) a.c. 15)om 16) oh 17)i.c 18) C&D 19) p.r. 20) p.v. 21) I&D 22) q.s. 23) stat 24) s.o.s. 25) SL 26) alt.h. 27) Rx 28) tsp29) tbsp 30) w/o</p>	1	17	10	7
2	<p>2.Marunthu& Dosage schedule</p> <p>2.1. Marunthu -Define Marunthu. Interpret the relationship between Panchabootham, Suvai, Thanmai and Pirivu in Siddha formulations</p> <p>2.2. Ulmarunthu(Internal medicine) - 32 Definition , Classification with examples and Ayulkaalam (Shelf Life)</p> <p>1) Surasam 2) Charu 3) Kudineer 4) Karkam 5) Utkali 6) Adai 7) Chooranam 8) Pittu 9) Vadagam 10) Vennai 11) Nei 12) Manappagu 13) Rasayanam 14) Ilakam 15) Ennai 16) Mathirai 17) Kadugu 18) Pakkuvam 19) Thenooral 20) Theeneer 21) Mezhugu 22) Kuzhambu 23) Pathangam 24) Chendhuram 25) Parpam 26) Kattu 27) Urukku 28) Kalangu 29) Chunnam 30) Karpam 31) Saththu 32) Guru kuligai</p>	1	8	6	3

	<p>2.3. Puramarunthu (External Medicine) - 32 Definition, Classification with examples and Ayulkalam (Shelf Life) 1) Kattu 2) Patru 3) Otradam 4) Poochu 5) Vedhu 6) Pottanam 7) Thokkanam 8) Pugai 9) Mai 10) Podithimirdhal 11) Kalikkam 12) Nasiyam 13) Oothal 14) Nasikaparanam 15) Kalimbu 16) Seelai 17) Neer 18) Varthi 19) Chuttigai 20) Salakai 21) Pasai 22) Kali 23) Podi 24) Murichal 25) Keeral 26) Kaaram 27) Attaivaldal 28) Aruvai 29) Kombukattal 30) Urinchal 31) Kuruthivaangal 32) Peechu.</p> <p>2.4 Dosage Schedule: Calculating the therapeutic dosage according to the age and condition of the patient.</p>				
3	<p>3.Alavugal (Measurements)& Principles of Drug Preparation</p> <p>3.1 a. Neetal Alavu, b. Niruthal Alavu, c. Mugathal Alavu and Comparison of (a), (b) and (c) with modern metrics. 3.2 Principles of Drug Preparation: Applications of Ega mooligai prayogam, Maarana prayogam , Dravaga prayogam, Cheyaneer prayogam and Muppu Chunna prayogam.</p>	1	8	3	2
4	<p>4.Instrumentation</p> <p>4.1 Siddha Instrumentation: i) Karuvigal (Instruments) 1.Kalvam 2. Surandi 3. Agal 4. Kuppi 5. Adaippaan 6.Salagaai 7.Chatti 8. Moosai 9. Seelai 10. Varatti 11. Manal 12. Viragu 13. Chunnaambu 14. Kari 15. Kuzhi 16. Pudam 17.Aduppu 18.Thuruthi ii)Porigal or Enthiram (Apparatus) 1.Avi Enthiram 2.Thulaa Enthiram 3.Thooba Enthiram 4.Mezhugu thyla Enthiram 5.Sudar thyla Karuvi 6.Kuppi puda Karuvi 7.Kuzhi thyla Karuvi 8. Chendooram erikkum Karuvi 9. Pathanga Karuvi 10.Vaalukaa Enthiram 11. Dravaga Vaalai Enthiram 4.2 Modern instruments and Pharmaceutical</p>	2	13	10	7

	<p>Machinery: 1.Disintegrator 2. Micro pulverizer 3. Pill cutting and making machine 4.Tablet compression machine 5.Capsule filling machine (a.Manual, b.Semi automatic, cAutomatic), 6.Ointment manufacturing Machine 7.Syrup making machine 8. Ball mill 9. End runner 10. Edge runner 11.Tray Dryer 12.Chopping machine 13. Mass mixer 14. Granulator 15. Sieve shaker 16. Juice Expeller 17. Planetary mixer 18. Roasting machine 19.Sealing machine 20.Fermentation equipment.</p> <p>4.3 Quality Control equipment in Drug Testing Laboratory(DTL):</p> <p>1. Atomic Absorption Spectroscopy (AAS) 2. Scanning Electron Microscope (SEM) 3. High Performance Thin Layer Chromatography (HPTLC) 4.Gas Chromatography-Mass Spectroscopy (GC-MS) 5.Fourier Transform Infrared Spectroscopy (FTIR) 6. Inductively Coupled Plasma-Optical Emission spectroscopy (ICPOES) 7. pH meter 8.Sieve analyzer 9. Tablet hardness tester 10.Refractometer, 11. IR moisture analyzer</p>				
5	<p>5.Muppu (Siddha Elixir) and Thogai charakukal</p> <p>5.1 Muppu: Definition, Basic principles of Muppu, Types of Muppu – Vadha Muppu , Vaithiya Muppu ,Yoga Muppu and applications of Muppu.</p> <p>5.2 Siddhar Rasavatham (Alchemy): Ref:[21],[22] Definition, Siddhar Rasavatha muraikal</p> <p>5.3 Thogai charakukal: Define Thogai charakukal and describe the following 1. Irumanjai 2. Irunannari 3. Thirikantham 4. Thirikaayam 5. Thiripathiri 6. Thirisukantham 7. Thirimanjai 8. Thirinimbam 9. Thirilavangam 10. Muccheeragam 11. Sathursaatham 12. Aingayam 13 Panjathiraviyam 14. Panjamoolam 15. Panjavaasam 16. Panjavarkkam 17. Lagupanjamoolam 18. Sirupanjamoolam 19. Panjaakkinimoolam 20. Panjavembu 21. Panjamooli 22. Panjakayam 23. .Panchathiraviyam 24. Menpodipanjaangam 25. Aararisi</p>	2	12	4	3

	26. Nalangumaa 27. Atta Santhanam 28. Attakkayam 29. Atta Moolam 30. Dhasamoolam				
6	<p>6.Formulations as per Gunapadam Mooligai Vaguppu</p> <p>1.Kandavizhtham 2.Adhimadhura Paal 3.Adhimadhura Chooranam 4.Adhimadhura Legiyam 5.Kattuvaadhi Kuligai 6.Omathugal 7.Ammaiyar koonthal Kudineer 8.Arukeerai Thailam 9.Aruvadha Thailam 10.Aavirai Kudineer 11.Adathodai Kudineer 12.Perichamkai vadagam 13.Uthamani Karukku 14.Ettikkottai Sathu 15.Ela Nei 16.Ela Vadagam 17.Kasakasa Legiyam 18.Kadukkai Legiyam 19.Kadukkai Sathu 20.Kandangkathari Ver Kudineer 21.Siruthekku Kudineer 22.Karungaali Sathu 23.Kechakkai Paruppu Kudineer 24.Kakkanam Ver Mathirai 25.Kaaya Moosambara Mathirai 26.Keezhanelli Thailam 27.Pasarai Kudineer 28.Kungiliya Kalimbu 29.Kodiveli Thailam 30.Chithira Moola Kuligai 31.Kodiveli patru 32.Koraikizhangu Kudineer 33.Sambirani Pathagam 34.Sivanar Vembu Kuzhi Thailam 35.Cheekai ooral Kudineer 36.Seenthil Sarkkarai 37.Seenthil Kudineer 38.Chukku Kudineer 39.Sowbagyasundi 40.Sevviam Ennai 41.Valladhagi Legiyam</p>	2	13	7	6

	42.Thennampaalai Kudineer 43.Thetran Vidhai Kudineer 44.Nathai Soori Thailam 45.Nerpori kudineer 46.Nellikai Thailam 47.Parangipattai Legiyam 48.Sirupeelai Samoola Kudineer 49.Pugailai Uppu 50.Perungaya Kalavai Mezhugu 51.Perungaya Chooranam 52.Marukkarai Kudineer 53.Maruthampattai Thailam 54.Maampattai Aviyal Neer 55.Maampattai Thailam 56.Madhulam Pinju Kudineer 57.Vilvapazha Manappagu 58.Vilva Pazha Sathu 59.Vilva Pazha Thailam 60.Veppampattai Thailam				
7	7.Formulations As Per Siddha Formulary of India (SFI) (Paper I) 7.1.Kudineer : Adathodai Kudineer Kapha Sura Kudineer Nilavembu Kudineer Nerinjil Kudineer Notchi Kudineer 7.2.Chooranam : Ashta Chooranam Amukkara Chooranam Elathy Chooranam Kazharchi Chooranam Sivadhai Chooranam Seendhil Chooranam Asai Chooranam Chundaivatral Chooranam Thalisathi Chooranam Tirikadugu Chooranam Tiripala Chooranam Panchadeepakini Chooranam Parangipattai Chooranam 7.3.Vadagam : Inji Vadagam Impural Vadagam Vazhaipoo Vadagam	3	29	20	14

7.4.Manappagu:

Madhulai Manappagu

7.5.Nei :

Seendhil Nei

Thanneer Vittan Nei

Thuthuvalai Nei

Brahmi Nei

Vallarai Nei

Venpoosani Nei

7.6.Rasayanam :

Thippili Rasayanam

Parangippattai Rasayanam

7.7.Ilakam:

Karisalai Ilakam

Karunai Ilakam

Sarapunka Vilvathi Ilakam

Thetran Kottai Ilakam

Nellikai Ilakam

Venpoosani Ilakam

7.8.Thailam:

Lagu Sandhanathi Thailam

Lagu Visamushti Thailam

Kalingadhi Thailam

Kalarchi Thailam

Keezhanelli Thailam

Kunthirikka Thailam

Kayyan Thailam

Sittramutti Madakku Thailam

Seeraga Thailam

Chukku Thailam

Nocchi Thailam

Punka Thailam

Merugulli Thailam

Meganadha Thailam

Vathakesari Thailam

7.9.Mathirai :

Lavangathi Mathirai

Kakkana Mathirai

Sambirani Kuligai

7.10.Theeneer:

Sombu Theeneer

7.11.Mezhugu:

Malakkudara Mezhugu

7.12.Kuzhambu:

Kumatti Kuzhambu

7.13.Pathangam:

Parangipattai Pathangam

7.14.Karpam:

Pavanakadukkai

	7.15.Patru: Musampara patru				
	7.16.Poochu: Padai Sankaaran-1				
Total Marks			100	60 hr	42 hr

Paper 2					
Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
8	<p>1. Formulations as per Siddha Formulary of India (SFI) (Paper II)</p> <p>1.1 Chooranam: Mayil Irugaathi Chooranam</p> <p>1.2 Thailam: Karappan Thailam. Mayana Thailam Virana Sanjeevi Thailam. Vellai Ennai (Poora Ennai)</p> <p>1.3 Mathirai : Kasthuri Mathirai Korosana Mathirai. Pachai Karpoora Mathirai. Bala Sanjeevi. Bramanatha Bairavam. Vasanth Kusumagaram Vishnu Chakkara Mathirai Kankasa Mathirai</p> <p>1.4 Mezhugu: Rasa Mezhugu Rasakanthi Mezhugu. Navauppu Mezhugu Pancha Sootha Mezhugu Mahaveera Mezhugu.</p> <p>1.5 Kuzhambu: Agasthiyar Kuzhambu</p> <p>1.6 Chenduram: Ayakantha Chenduram. Aya Chenduram Ayaveera Chenduram. Rasa Chenduram.</p>	1	36	18	14

Linga Chenduram - 1
Uloka Mandoora Chenduram
Kaadikara Chenduram
Kaantha Chenduram
Gowri Chinthamani
Canda Marutha Chenduram
Thanga Chenduram.
Thambira Chenduram (Chembu)
Thalaga Chenduram.
Naaga Chenduram
Vedi Annabedi Chenduram.
Velli Chenduram

1.7 Parpam:

Amai Ottu Parpam
Kanthaga Parpam.
Karuvanga Parpam.
Sangu Parpam.
Sirungi Parpam (Maan Kombu)
Chembu Parpam.
Thanga Parpam
Thalaga Parpam
Nandukkal Parpam
Nathai Parpam
Naaga Parpam
Pancha Lavana Parpam.
Padigara Parpam
Palagarai Parpam.
Pavala Parpam
Peranda Parpam - 1
Muthu Parpam
Muthuchippi Parpam
Vengara Parpam
Velvanga Parpam
Velli Parpam

1.8 Karuppu:

Kasthuri Karuppu
Sivanar Amirtham
Thalaga Karuppu

1.9 Kattu:

Poora Kattu
Vellai Paadana Kattu

1.10 Chunnam :

Velvanga Chunnam

1.11 Karpam:

Aya Birungaraja Karpam
Aya Sambeera Karpam

1.12 External/ Topical Applications:

Amirtha Vennai (Savvera Kuzhumbu)

	Kilinjai Melugu. Megha Virana Kalimbu Vellai Mezhugu Padigara Neer Venkara Podi.				
9	<p>2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu</p> <p>2.1. Formulations including Theraiyar process as per Gunapadam Thathu Vaguppu</p> <ol style="list-style-type: none"> 1. Aya Parpam (Theraiyar Yamaga Venba Murai & other methods) 2. Aya Mezhugu 3. Aya Bringaraja Panitham 4. Aya Naga Parpam (Theraiyar Yamaga Venba Murai) 5. Ekku Parpam (Theraiyar Yamaga Venba Murai & other methods) 6. Ekku Chenduram (Theraiyar Yamaga Venba Murai & other methods) 7. Thiriloga Chenduram 8. Vanga Chenduram 9. Vanga Pugai 10. Vanga Seelai 11. Kantha Parpam(Theraiyar Yamaga Venba Murai & other methods) 12. Maha Mandooram 13. Sitha Mandooram 14. Thirikadugathi Mandooram 15. Narayana Mandooram 16. Mandoora Mathirai 17. Mandoorathi Adai Kashayam 18. Karung kuzhambu 19. Velvanga Chenduram 20. Thanga Uram 21. Velli Uram 22. Velli Chunnam 23. Rasa Parpam (Theraiyar Yamaga Venba Murai & other methods) 24. Rasa Thailam 25. Rasa Kalimbu 26. Rasa pugai 27. Sootha Karuppu 28. Guru Kuligai 29. Sirangu Poochu 30. Linga Parpam (Theraiyar Yamaga Venba Murai & other methods) 	2	41	25	17

31. Chanda Rasa Parpam
32. Linga Vaippu
33. Linga Pugai
34. Pooram Vaippu
35. Poora Parpam
36. Rasa Karpooora Kuligai
37. Poora Kalimbu
38. Poora Podi
39. Saveeram Vaippu
40. Veera Mathirai
41. Saveera Chenduram
42. Saveera Kattu
43. Veera Rasa Parpam
44. Veera Neer
45. Veera Kalimbu
46. Veera Kuzhambu
47. Jeya Veera Ranasingi Kayiru
48. Neelanjana Mai
49. Sarvavida thodaari Kuligai
50. Kanthaga chenduram
51. Kanthaga Mathirai
52. Kanthaga Vadagam
53. Gowri Vaippu
54. Gowri Paadaana Maathirai
55. Gowri Mezhugu
56. Thalaga Mathirai
57. Thalaga Kattu
58. Manosilai parpam
59. Manosilai Mathirai
60. Manosilai chenduram
61. Manosilai Pugai
62. Manosilai Chooranam
63. Manosilai Ennai
64. Chandrodhaya maathirai
65. Mirutharusingi Vaippu
66. Singi Vanga Parpam
67. Mirutharusingi chenduram
68. Pashana Parpam
69. Pashana chenduram
70. Pashana Mathirai
71. Pashana Mezhugu
72. Vishankaluku Kuzhambu
73. Appalakaara parpam
74. Thenkai saaram
75. Karupa Grihani Melugu
76. Kallupu Chenduram
77. Lavana Parpam
78. Uppu Parpam (Theraiyar Yamaga Venba Murai & other methods)
79. Kariyuppu Dhnavagam

80. Padikara Chenduram
81. Karpoorathy Chooranam
82. Karpoorathi Mathirai
83. Navatchara Vaippu
84. Navachara Akraanam
85. Navachara Kuzhambu
86. Navachara Ennai
87. Navachara Chenduram
88. Pachai Karpoora Vadagam
89. Pachai Karpoora Anjana Kuligai
90. Pachai Karpoora Podi
91. Pachaikarpoora Vaippu
92. Pancha Lavana Chunnam
93. Sotruppathi Chooranam
94. Ambar Mathirai
95. Vengara Vaippu
96. Vengara Kattu
97. Vedyuppu Vaippu
98. Pottiluppu Dhnavaga
99. Pavala Chenduram
100. Muthu Chunnam
101. Muthu Chenduram
102. Abraga Parpam (Theraiyar Yamaga Venba Murai & other methods)
103. Abraga Chenduram (Theraiyar Yamaga Venba Murai & other methods)
104. Sorna Abraga Chenduram
105. Thirikadugu Mathirai
106. Kalnar Chunnam
107. Kalnar Parpam
108. Kadikkara Vaippu
109. Thurusu Chenduram (Theraiyar Yamaga Venba Murai & other methods)

2.2. Formulations including Theraiyar process as per Gunapadam Jeeva Vaguppu

1. Amaiottu Karukku Kudineer
2. Amaiottu Karukku
3. Amaiottu Mathirai
4. Amai Ilakam
5. Iragu Parpam (Theraiyar Yamaga Venba Murai)
6. Udumbu Chooranam
7. Udumbu Ilakam
8. Elumbu Parpam (Theraiyar Yamaga Venba Murai)
9. Onan Sudar Tailam
10. Sirukilinjil Parpam (Theraiyar Yamaga Venba Murai)
11. Perumkilinjil Parpam (Theraiyar Yamaga Venba Murai)
12. Kulambu Parpam (Theraiyar Yamaga Venba Murai)

	13. Kulavikoonda Kudineer 14. Arakku Thailam 15. Kombu Parpam (Theraiyar Yamaga Venba Murai) 16. Korosanai Ennai 17. Sitranda Mezhugu 18. Karunkozhi Chooranam 19. Sangu Chenduram 20. Vellai Mathirai 21. Thantha Parpam(Theraiyar Yamaga Venba Murai) 22. Nandu Theeneer 23. Nandu Kuzhambu 24. Nathai chippi Parpam 25. Palagarai Chenduram (Theraiyar Yamaga Venba Murai) 26. Silai Thailam 27. Navaneetha Parpam (Theraiyar Yamaga Venba Murai & other methods) 28. Kasthuri mezhugu 29. Poonaga Chenduram 30. Poonaga Karukku Kudineer 31. Poonaga Karukku 32. Poonaga saththu 33. Musuru Muttai Ennai 34. Muttai Odu Parpam (Theraiyar Yamaga Venba Murai) 35. Mezhugu Kalimbu 36. Chandira Kala Lepam				
10	3.Pathiyam, Anubanam & Thunai Marunthu 3.1. Pathiyam (Diet regimen)Ref:[2],[7],[12],[35],[36] Definition Pathiya patharthangal Marunthirkku aaga porutkal Pathiyathin vagaigal 3.2. Anubanam (Vehicle) & Thunai Marunthu (Adjuvant) Definition Examples	3	8	5	3
11	4.Drug Standardization 4.1. Definition ,Introduction to Drug Standardization, Organoleptic characters, Physico chemical parameters, Microbial assay and Aflatoxin assay, Heavy metal analysis	3	9	7	5

	<p>4.2. Brief about Drugs and Cosmetic Act and Magic remedies Act, Drug Regulatory bodies (Central and State)</p> <p>4.3. Introduction to Intellectual Property Rights (IPR) including National Biodiversity Authority (NBA) & Traditional Knowledge Digital Library (TKDL)</p> <p>4.4. Food Safety and Standards Authority of India(FSSAI) Act , Approved preservatives, colours and sweeteners.</p>				
12	<p>5.Recent Advances in Pharmaceutics</p> <p>5.1 Nanomedicine Biomedical application Advances in nanomedicine with few examples</p> <p>5.2. Pharmacogenomics Introduction Siddha genomics for personalized medicine (According to the constitution).</p> <p>5.3. Drug Discovery & Development Brief introduction to the process of Traditional and Modern Drug Discovery & Development. Concepts of Reverse Pharmacology. Brief Introduction to Pharmaco- epidemiology, Pharmacoeconomics, and Pharmaco- genetics.</p>	3	6	5	3
Total Marks			100	60 hr	42 hr

Table 3: Learning objectives (Theory) of Course

Paper 1									
A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Dom ain/s ub	D3 Must to know / desirable to know / Nice to know	E3 Level Does/ Show s how/ Know ws how/ Know w	F3 T-L meth od	G3 Assessment (Refer abbr eviations)	H3 Form ative/ sum mative	I3 Term	J3 Integ ratio n
Topic 1									
1. Pharmacy									
(Lecture :10 hours, Non lecture: 7 hours)									
CO2,CO3,CO 7	Explain in detail about Marunthu Sei Nilayam(Pharmacy), Raw Drug Store (RDS), Preparation Section ,Prepared Medicine Store as per Theraiyar quotes	CC	MK	KH	L,BS, ECE	PRN	F&S	I	
CO2,CO3,CO 7	Explain about Good Manufacturing Practice (GMP)	CC	MK	KH	L&PP T,AC T	CL-PR,CHK	F&S	I	
CO2,CO3,CO 7	Explain in detail about Good Storage Practice (GSP)	CK	MK	KH	L	CL-PR	F&S	I	
CO2,CO3,CO	Describe about drug dispensing methods & prescription writing	CK	MK	KH	L&G	Log book	F&S	I	V-

7					D,PB L,EC E,AC T				MM
CO2,CO3,CO 7	Explain Medical abbreviations	CK	MK	KH	L	M-CHT	F&S	I	
CO2,CO3,CO 7	Categorize the storage methods of Siddha formulations.	CAN	DK	KH	PrBL	CL-PR	F&S	I	
CO2,CO3,CO 7	Demonstrate drug dispensing metrics	PSY- SET	NK	SH	ECE, D	P-PRF	F	I	
Topic 2									
2.Marunthu& Dosage schedule									
(Lecture :6 hours, Non lecture: 3 hours)									
CO1,CO2,CO 3	Define Marunthu and its types	CK	MK	K	L	INT	F&S	I	
CO1,CO3,CO 7	Interpret Panchabootha theory, suvai, thanmai and veeriyam with ulmarunthugal and puramarunthugal.	CC	MK	KH	BS	CL-PR	F	I	
CO1,CO3,CO 7	Explain Ulmarunthu verse.	CC	MK	KH	L,AC T	P-REC,M- POS	F&S	I	
CO1,CO3,CO 7	Explain in detail about 32 types of Ulmarunthugal with examples	CC	MK	K	L_VC	PRN	F&S	I	
CO1,CO3,CO 7	Explain Puramarunthu verse	CK	MK	KH	L&G D	CL-PR	F&S	I	

CO1,CO3,CO 7	Describe in detail about 32 types of Puramarunthugal with examples	CC	MK	KH	L_VC	PUZ,INT	F&S	I	
CO1,CO3,CO 7	Demonstrate the different methods of extraction of Chaaru.	PSY- SET	DK	SH	D	P-PRF	F&S	I	
CO1,CO3,CO 7	Demonstrate the different drug delivery methods in puramarunthugal.	PSY- SET	MK	KH	L_VC ,PBL	PRN,P-PRF	F&S	I	
CO1,CO3,CO 7	Describe the various methods of preparation of parpam,chenduram and thailam.	CC	MK	KH	L&PP T	P-PRF,CL- PR,M-CHT	F&S	I	
CO2,CO3,CO 7	Debate on shelf life mentioned in literature and shelf life followed in pharamaceuticals	AFT- VAL	DK	K	L&G D,EC E	DEB	F	I	
CO1,CO3,CO 7	Explain dosage schedule according to the age and condition of the patient	CC	MK	KH	L&G D	CL-PR	F&S	I	V- KM

Topic 3

3.Alavugal (Measurements)& Principles of Drug Preparation

(Lecture :3 hours, Non lecture: 2 hours)

CO1,CO3,CO 4	Define Alavugal and its types with examples	CK	MK	KH	DIS,D	PUZ	F&S	I	
CO1,CO3,CO 4	Demonstrate Neetal alavu, Niruthal alavu, Mugathal alavu	PSY- SET	MK	KH	L,D	INT	F&S	I	

CO1,CO3,CO4	Compare Alavugal with modern metrics	CAN	DK	K	L,TB L	QZ ,CL-PR	F&S	I	
CO1,CO3,CO5	Define principles of drug preparation and its types	CK	MK	KH	L_VC ,DIS	CL-PR,PA	F&S	I	
CO1,CO3,CO5	Describe in detail about Ega Mooligai prayogam, Maarana prayogam, Dravaga prayogam,Ceyaneer prayogam and Muppu chunna prayogam with examples.	CC	MK	KH	L,BL	CL-PR,M- POS	F&S	I	
Topic 4									
4.Instrumentation									
(Lecture :10 hours, Non lecture: 7 hours)									
CO2,CO5	Describe in detail about Karuvigal (instruments)	CK	MK	KH	L_VC ,D-M	PRN	F&S	II	
CO2,CO5	Explain in detail about Enthirangal(Apparatus)	CK	MK	KH	L&PP T	M-MOD	F&S	II	
CO2,CO5	Describe about Thaptha kalvam	CK	MK	KH	L_VC	DEB,INT	F&S	II	
CO2,CO4	Explain in detail about Modern instruments & Pharmaceutical machinery listed in subtopics.	CC	MK	KH	L_VC ,FV	CL-PR	F&S	II	
CO2,CO4	Describe in detail about Quality control equipments, such as Atomic Absorption Spectroscopy (AAS), Scanning Electron Microscope (SEM) ,High Performance Thin Layer	CK	NK	KH	L_VC ,FV,A CT	CL-PR	F	II	

	Chromatography (HPTLC) ,Gas Chromatography-Mass Spectroscopy (GC-MS) , Fourier Transform Infrared Spectroscopy (FTIR) ,Inductively Coupled Plasma-Optical Emission spectroscopy (ICPOES) in Drug Testing Laboratory (DTL)								
CO2	Design models of Karuvigal & Enthirangal	PSY-SET	MK	SH	KL,D-M	P-PRF	F	II	
CO2,CO4	Demonstrate the application of pH meter,Sieve analyser,Refractometer,Tablet hardness tester and IR moisture analyzer	PSY-GUD	MK	SH	DA	P-PRF	F	II	
CO2	Differentiate the effective operation of modern instruments with karuvigal or enthiram in medicine preparation process	AFT-VAL	DK	KH	L&G D,FV	INT	F	II	
Topic 5									
5.Muppu (Siddha Elixir) and Thogai charakukal									
(Lecture :4 hours, Non lecture: 3 hours)									
CO1,CO3,CO5	Describe about Muppu and its basic principles	CK	MK	KH	L&PP T,ED U	INT,PA	F&S	II	H-GMM
CO1,CO3,CO5	Explain in detail about types of Muppu and its applications	CK	MK	KH	L,FC	CL-PR	F&S	II	
CO1,CO3,CO5	Define Rasavatham(Siddha alchemy) and mention the herbs,metals,minerals involved in the process of Rasavatham.	CK	MK	KH	L_VC ,RLE	DEB	F&S	II	V-SATV

CO1,CO3,CO 5	Demonstrate the process of Rasagandhi vedhai,Seyarkai ponn,Seyarkai velli,Guru Marunthu and Rasa mani	CC	MK	KH	PrBL	M-POS	F	II	
CO1	Define Thogai Charakukul and state the names of Thogai Charakukul and summarize the ingredients to each listed in the sub topics	CK	DK	K	L&G D	QZ	F&S	II	
Topic 6									
6.Formulations as per Gunapadam Mooligai Vaguppu									
(Lecture :7 hours, Non lecture: 6 hours)									
CO1,CO3,CO 6	Describe in detail about the ingredients, method of preparation,dose(if applicable),vehicle(if applicable), important therapeutic uses and diet restrictions(if applicable) of formulations (listed in Subtopics).	CK	MK	K	L&PP T,BL	CL-PR,INT	F&S	II	
CO1,CO2,CO 3	Demonstrate the ingredients, method of preparation and therapeutic usage of Aaviraikudineer	PSY- GUD	MK	SH	TBL	P-VIVA,P- PRF	F&S	II	
CO1,CO2,CO 3	Differentiate the various consistencies of thailam based on their method of preparation & route of administration.	AFT- VAL	MK	KH	TBL	INT,PA	F	II	
CO1,CO2,CO 3	Demonstrate the method of preparation of Kandavizhtham	PSY- SET	DK	SH	D	P-PRF	F	II	

CO1,CO2,CO 3	Demonstrate the ingredients, method of preparation,dose,vehicle and important therapeutic usage of Uthamani Karukku	PSY- SET	DK	SH	PBL	OSPE	F	II	
Topic 7									
7.Formulations As Per Siddha Formulary of India (SFI) (Paper I)									
(Lecture :20 hours, Non lecture: 14 hours)									
CO1,CO3,CO 6,CO7	Describe in detail about the ingredients, method of preparation,dose,vehicle and important therapeutic uses diet restrictions (if applicable) of formulations(Listed in subtopics).	CK	MK	KH	L_VC ,DIS, D	CL-PR,CHK, OSPE	F&S	III	
CO1,CO3,CO 7	Identify formulations based on colour, smell and consistency	CK	MK	SH	D	PRN	F	III	
CO1,CO3,CO 7	Demonstrate the method of extraction of uppu from herbal sources	PSY- SET	MK	SH	PRA	P-PRF	F	III	H- GMM
CO1,CO3,CO 5	Discuss and justify the reduction in volume of kudineer in various proportions in the process of kudineer preparation	AFT- RES	NK	KH	BS	P-SUR,DEB	F	III	

Paper 2									
A3 Course	B3 Learning Objective (At the end of the session, the	C3 Dom	D3 Must to	E3 Level	F3 T-L	G3 Assessment	H3 Form	I3 Term	J3 Integ

outcome	students should be able to)	ain/s ub	know / desirable to know / Nice to know	Does/ Show s how/ Know ws how/ Know w	meth od	(Refer abbr eviations)	ative/ sum mativ e		ratio n
Topic 1									
1. Formulations as per Siddha Formulary of India (SFI) (Paper II)									
(Lecture :18 hours, Non lecture: 14 hours)									
CO1,CO2,CO 3,CO6,CO7	Describe in detail about the ingredients, method of preparation,dose,vehicle,important therapeutic uses, pathiyam(if applicable) of formulations(listed in subtopics).	CK	MK	KH	L_VC ,TBL	P-PRF,CL-PR	F&S	I	
CO2,CO3,CO 6	Demonstrate the traditional methods for quality assessment in higher order formulations	CE	MK	SH	ECE, D_L	INT	F	I	
CO1,CO2,CO 3	Differentiate Ooral Kudineer, Kudineer and Adai Kudineer	AFT- VAL	MK	KH	L_VC	P-PRF	F	I	
CO2,CO3,CO 7	Interpret the special methods available to complete the formulations which was not finished properly	CC	NK	KH	PT	P-RP	F	I	
CO2,CO3,CO	Interpret the reason for the medicines that can be used only after	CC	MK	K	DIS	PUZ	F&S	I	

4,CO7	a particular period of time (Pazhaga vaithu payanpaduthum marunthukal) and also list out those medicines.								
Topic 2									
2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu									
(Lecture :25 hours, Non lecture: 17 hours)									
CO1,CO2,CO3,CO6,CO7	Describe in detail about the ingredients, methods of preparation,dose,vehicle, important therapeutic uses,diet restrictions(if applicable),Magimai (if applicable) and puranadai (if applicable) of formulations. (listed in Subtopics)	CK	MK	KH	L_VC,DIS,ECE,D	CL-PR,CHK,OSPE	F&S	II	
CO3,CO7	Interpret precautions for Higher order drug preparations	CC	MK	K	L_VC,ECE	INT	F	II	
CO1,CO2,CO3,CO6,CO7	List out the higher order formulations that can be prepared using single herbal juice	CK	MK	KH	SDL	COM	F&S	II	
CO1,CO2,CO3,CO6,CO7	Name the Thathu & Jeevam formulations used as Kaya Karpam	CK	DK	KH	LS	INT	F&S	II	
CO1,CO2,CO3,CO6,CO7	Discuss the reason for the yellow colour of Thanga parpam	AFT-RES	NK	KH	BS,IBL	DEB	F	II	
CO1,CO2,CO3,CO6,CO7	Memorize the verse for Parpa magimai mentioned in Theran Tharu	CK	MK	KH	REC	M-CHT	F&S	II	
CO1,CO2,CO3,CO6,CO7	Select the formulations in Gunapadam Thathu & Jeeva Vaguppu used to treat Psychiatric diseases(Piramai, Paithiyam etc)	CK	MK	KH	SDL	CL-PR	F&S	II	V-VPS

CO1,CO2,CO3,CO6,CO7	Describe the application of Palagarai Parpam in Jeeva Veri Nanju & wounds	CK	MK	KH	L	PUZ,CL-PR	F&S	II	
CO1,CO2,CO3,CO6,CO7	Explain in detail about the formulations prepared by using Seyarkkai ulokangal(Venkalam, Pithalai & Thara) and Nimilai	CC	NK	K	L&G D	INT	F	II	
CO1,CO2,CO3,CO6,CO7	Explain in detail about synthetic method of preparations (Vaippu Muraigal) of Evaatcharam,Ekambacharam,Kanthi uppu and Kanthi lavanam.	CC	MK	KH	L,L& PPT	PRN,P-PRF	F	II	
CO1,CO2,CO3,CO6,CO7	Explain in detail about Synthetic method of preparations(Vaippu muraigal) of Kaichu lavanam, Sakthisaaram, Sindhuppu,Thila lavanam and Pidaa lavanam.	CC	MK	KH	L,L& PPT	P-REC,CL-PR	F	II	
CO1,CO2,CO3,CO6,CO7	Explain in detail about synthetic method of preparations (Vaippu Muraigal) of Muthu and Palthutham.	CC	MK	KH	L,L& PPT	PRN,P-PRF	F	II	
Topic 3									
3.Pathiyam, Anubanam & Thunai Marunthu									
(Lecture :5 hours, Non lecture: 3 hours)									
CO1,CO6	Define Pathiyam & describe in detail about Pathiyapatharthagal & Marunthirkku aaga porutgal	CK	MK	KH	L&G D,AC T	QZ ,PUZ	F&S	III	H-NA VO
CO1,CO6	Explain briefly about Pathiyathirkana uppu,Parangipattaikkana	CC	MK	KH	L,DIS	INT	F&S	III	

	pathiyam and Thailagalin pathiyam								
CO1,CO6	Explain Aya parpathin pathiyam, Aya chendurathin pathiyam,Ekku parpathin pathiyam,Kantha chendurathin pathiyam,Thambira parpathin pathiyam & Rasa pathiyam	CK	MK	KH	SDL	PUZ	F&S	III	
CO1,CO6	Enlist the Pathiyam for Rasa Mezhugu , Navauppu Mezhugu	CK	MK	KH	L&PP T	QZ	F&S	III	
CO1,CO6	Explain the pathiyam for Idivallathi mezhugu,Agathiyar Kuzambu	CK	MK	KH	L	CL-PR	F&S	III	
CO1,CO6	Define Anubanam,Thunai Marunthugal ,dosage ratio with examples	CC	MK	KH	L&G D	COM,PA	F&S	III	
Topic 4									
4. Drug Standardization									
(Lecture :7 hours, Non lecture: 5 hours)									
CO4,CO5	Describe in detail about Drug Standardization, Organoleptic characters, Physicochemical parameters, Microbial assay & Aflatoxin assay and Heavy metal analysis	CK	MK	KH	L&PP T	CL-PR	F&S	III	
CO4,CO5	Describe about Drugs and Cosmetics Act , Magic Remedies Act and Drug regulatory bodies (Central & State)	CK	MK	KH	L&G D	PRN	F&S	III	

CO4,CO5	Explain in detail about Intellectual Property Rights	CC	MK	KH	L&PP T	CL-PR	F&S	III	
CO4,CO5	Define Food Safety & Standards Authority of India (FSSAI) act, approved preservatives, colours and sweetners	CK	NK	KH	L_VC ,DIS	PRN,DEB	F&S	III	
CO4,CO5	Describe the scopes of Traditional Knowledge Digital Library(TKDL) with reference to Intellectual Property Rights(IPR)	CC	MK	KH	IBL	CL-PR,PA	F	III	
CO4,CO5	Describe the application forms and purpose of application of National Biodiversity Authority (NBA)	CK	DK	KH	L&G D,ML	CL-PR	F&S	III	
Topic 5									
5.Recent Advances in Pharmaceutics									
(Lecture :5 hours, Non lecture: 3 hours)									
CO3,CO7	Explain in detail about Biomedical application and Advances in nanomedicine with few examples	CK	MK	K	BS,PL	PRN,INT	F	III	
CO7	Discuss the correlation of Nanomedicine with Siddha higher order formulations	CC	MK	KH	DIS	CR-RED	F	III	
CO7	Explain Pharmacogenomics with special reference to Body constitution as per Siddha.	CK	MK	K	L&PP T	INT	F&S	III	H- NN1

CO7	Discuss the relevance of reverse pharmacology in Traditional and Modern Drug Discovery & Development.	CC	DK	KH	L&G D	CL-PR	F&S	III	
CO7	Define Pharmaco-epidemiology and their applications in pharmaceutical industry	CK	MK	K	L&PP T	CL-PR	F&S	III	
CO3,CO7	Define Pharmaco-economics and its applications in pharmaceutical industry	CK	MK	K	L_VC	INT	F&S	III	
CO3,CO7	Define Pharmaco-genetics and its applications in Pharmaceutical industry	CK	DK	K	L_VC	CL-PR	F&S	III	

List of Practicals (Term and Hours)

PRACTICALS (Marks-100)			
S.No	List of Topics	Term	Hours
1	Maanthathukku Karukku Kudineer (Major)	1	2
2	Chooranam:Nilavagai Chooranam(Major)	1	2
3	Indhuppu Chooranam (Major)	1	2
4	Vadagam:Thalisadhi Vadagam (Major)	1	2
5	Nei:Senkottai Nei (Major)	1	2
6	Vennai: Kungiliya Vennai (Major)	1	2
7	Manapagu: Adathodai Manappagu (Major)	1	2
8	Kudineer: Arathai Kudineer (Minor)	1	2

9	Kandhaga Rasayanam (Major)	1	4
10	Anda ilakam (Major)	1	2
11	Pinda Thailam (Major)	1	2
12	Sirattai Thailam (Major)	1	4
13	Surasam: Inji Surasam (Minor)	1	2
14	Charu:Kattrazhai Charu (Minor)	1	2
15	Urai Mathirai (Major)	1	4
16	Karkam:Keezhanelli Karkam (Minor)	1	2
17	Utkali:Kadugu Utkali(Minor)	1	2

18	Adai:Kalyana Murungai Adai (Minor)	1	2
19	Moolakudara Ennai (Minor)	1	2
20	Rasayanam: Inji Rasayanam (Major)	1	2
21	Ilakam: Pancha Deepakini Ilakam (Major)	1	2
22	Kesari Ilakam (Major)	1	2
23	Kandhaga Sudar Thailam (Major)	1	2
24	Ennai: Anda Thailam (Major)	1	2
25	Mathan Thailam (Major)	1	2
26	Mathirai: Swasakudori Mathirai (Major)	1	2

27	Murukkan Vithai Mathirai (Major)	2	4
28	Santha Sandhrodhaya Mathirai (Major)	2	4
29	Mezhugu: Kariyuppu Mezhugu (Major)	2	4
30	Theeneer: Oma Theeneer (Major)	2	6
31	Kadugu: Nunaa Kadugu (Minor)	2	2
32	Thenooral: Nellikai Thenooral (Minor)	2	2
33	Sanga Dravagam (Major)	2	6
34	Kanthi Mezhugu (Major)	2	6
35	Kuzhambu : Jathi Jambeera Kuzhambu (Major)	2	2

36	Chenduram : Annabedhi Chenduram (Major)	2	4
37	Pathangam :Rasa Pathangam (Major)	2	6
38	Padiga Linga Thuvar (Major)	2	2
39	Arumuga Chenduram (Major)	2	12
40	Kattu : Linga Kattu (Major)	2	2
41	Parpam: Kungiliya Parpam (Major)	2	2
42	Silasathu Parpam (Major)	2	4
43	Chunnam :Vediyuppu Chunnam (Major)	2	4
44	Karpam :Irunelli Karpam (Major)	2	2

45	Chaththu :Nayuruvi Uppu (Major)	2	6
46	Patru :Padikaara Patru (Minor)	3	2
47	Otradam :Thazhuthaalai Ottradam or Aamanakku Ilai or Puli ilai Ottradam (Preparation of Kizhi Using Herbals) (Minor)	3	2
48	Pottanam :Oma Pottanam (Minor)	3	2
49	Thiri :Vettilai Manjal Thiri (Minor)	3	2
50	Nasiyam :Mooku Thuli (Major)	3	2
51	Podi :Pal Podi (Minor)	3	2
52	Kali :Oomathai Kali (Minor)	3	2
53	Thalaivali Pasai (Minor)	3	2

54	Neer : Anda Neer (Minor)	3	2
55	Kalimbu :Vanga Vennai (Minor)	3	2
56	Aakiraanam : Thumbai Ver Aakiraana podi (Minor)	3	2
57	Poochu :Neerkovai Mathirai (Major)	3	2
58	Kalikkam :Ilaneer Kuzhambu (Major)	3	4
59	Pasai : Karpogi Pasai (Major)	3	4
60	Vaippu murai: Indhuppu Vaippu (Major)	3	4
61	Karam :Pun Podi (Major)	3	4
62	Siddha cosmetics: Handmade Soap (Major)	3	4

63	Herbal Shampoo (Major)	3	4
64	Face Pack (Major)	3	4
65	Face Cream (Major)	3	4
66	Cheyaneer :Vediyuppu Cheyaneer (Major)	3	2

Table 4: Learning objectives (Practical)

A4 Course outcome	B4 Learning Objective (At the end of the session, the students should be able to)	C4 Dom ain/s ub	D4 Must to know / desirable to know / Nice to know	E4 Level Does/ Show s how/ Kno ws how/ Kno w	F4 T-L meth od	G4 Assessment (Refer abbr eviations)	H4 Form ative/ sum mative	I4 Term	K4 Integ ratio n
Topic 1 Surasam: Inji Surasam (Minor)									
CO1,CO2,CO 3	Demonstrate the method of Preparation of Inji Surasam	PSY- GUD	MK	SH	D,PR A	P-EXAM	F&S	I	
Topic 2 Charu:Kattrazhai Charu (Minor)									
CO1,CO2,CO 3	Demonstrate the method of taking Kattrazhai charu	PSY- GUD	MK	SH	DIS,P RA	P-EXAM	F&S	I	
Topic 3									

Kudineer: Arathai Kudineer (Minor)									
CO1,CO2,CO 3	Demonstrate the Preparation of Arathai Kudineer	PSY- GUD	MK	SH	DIS,P L,PT	P-EXAM	F&S	I	
Topic 4									
Maanthathukku Karukku Kudineer (Major)									
CO1,CO2,CO 5	Demonstrate the method of preparation of Maanthathuku karukku kudineer	PSY- GUD	MK	SH	PRA	P- EXAM,OSPE	F&S	I	
Topic 5									
Karkam:Keezhanelli Karkam (Minor)									
CO1,CO2,CO 3	Demonstrate the preparation of Keezhanelli Karkam	PSY- GUD	MK	SH	PT,D	P-EXAM,INT	F&S	I	
Topic 6									
Utkali:Kadugu Utkali(Minor)									
CO1,CO2,CO 3	Demonstrate the Method of Preparation of Kadugu Utkali	PSY- GUD	MK	SH	DIS,P T	P-EXAM,P- PRF	F&S	I	

Topic 7									
Adai:Kalyana Murungai Adai (Minor)									
CO1,CO2,CO 3	Demonstrate the preparation of Kalyana Murungai Adai	PSY- GUD	MK	SH	DIS,P RA	P-EXAM	F&S	I	
Topic 8									
Chooranam:Nilavagai Chooranam(Major)									
CO1,CO2,CO 3	Demonstrate the method of preparation of Nilavagai Chooranam	PSY- GUD	MK	KH	PRA	P-EXAM	F&S	I	
Topic 9									
Indhuppu Chooranam (Major)									
CO1,CO2,CO 3,CO5	Demonstrate the method of preparation of Indhuppu chooranam	PSY- GUD	MK	SH	PT	P-EXAM	F&S	I	
Topic 10									
Vadagam:Thalisadhi Vadagam (Major)									
CO1,CO2,CO	Demonstrate the method of preparation of Thalisadhi vadagam	PSY-	MK	SH	PT	P-	F&S	I	

3,CO5		GUD				EXAM,OSPE			
Topic 11									
Vennai: Kungiliya Vennai (Major)									
CO1,CO2,CO3	Demonstrate the Preparation of Kungilia Vennai	PSY-MEC	MK	SH	PT	P-EXAM,OSPE	F&S	I	
Topic 12									
Manapagu: Adathodai Manappagu (Major)									
CO1,CO2,CO3,CO5	Demonstrate the method of preparation of Adathodai Manapagu	PSY-GUD	MK	SH	PT	P-EXAM	F&S	I	
Topic 13									
Nei:Senkottai Nei (Major)									
CO1,CO2,CO3,CO5	Demonstrate the method of preparation of Senkottai Nei	PSY-GUD	MK	SH	PT	P-EXAM,OSPE	F&S	I	
Topic 14									
Rasayanam: Inji Rasayanam (Major)									

CO2,CO3,CO 5	Demonstrate the method of preparation of Inji Rasayanam	PSY- GUD	MK	SH	PT	P-EXAM	F&S	I	
Topic 15 Kandhaga Rasayanam (Major)									
CO1,CO2,CO 3,CO5,CO6	Demonstrate the preparation of Kandhaga rasayanam	PSY- GUD	MK	KH	PT	P- EXAM,OSPE	F&S	I	
Topic 16 Ilakam: Pancha Deepakini Ilakam (Major)									
CO1,CO2,CO 3,CO5	Demonstrate the method of preparation of Pancha deepakini ilakam	PSY- GUD	MK	SH	PT	P-EXAM	F&S	I	
Topic 17 Kesari Ilakam (Major)									
CO1,CO2,CO 3,CO5	Demonstrate the method of preparation of Kesari ilakam	PSY- GUD	MK	SH	PT	P-EXAM	F&S	I	
Topic 18 Anda ilakam (Major)									

CO1,CO2,CO3,CO5	Demonstrate the method of preparation of Anda ilakam	PSY-GUD	MK	KH	PRA	P-EXAM	F&S	I	
Topic 19									
Ennai: Anda Thailam (Major)									
CO1,CO2,CO3	Demonstrate the preparation of Anda thailam	PSY-GUD	MK	SH	PT	P-EXAM	F&S	I	
Topic 20									
Pinda Thailam (Major)									
CO1,CO2,CO3	Demonstrate the preparation of Pinda Thailam	PSY-SET	MK	SH	D	P-EXAM	F&S	I	
Topic 21									
Moolakudara Ennai (Minor)									
CO1,CO2,CO3	Demonstrate the preparation of Moolakudara Ennai	PSY-GUD	MK	SH	DIS,PT	P-EXAM	F&S	I	
Topic 22									

Mathan Thailam (Major)									
CO3	Demonstrate the preparation of Mathan Thailam	PSY- MEC	MK	SH	PT	P-EXAM	F&S	I	
Topic 23									
Sirattai Thailam (Major)									
CO1,CO2,CO 3	Demonstrate the method of preparation of Sirattai thailam by using special apparatus	PSY- GUD	MK	SH	PT	P-EXAM	F	I	
Topic 24									
Kandhaga Sudar Thailam (Major)									
CO1,CO3,CO 5	Demonstrate the method of preparation of Kandhaga sudar thailam by using Sudar thaila karuvi	PSY- GUD	MK	SH	PT	P-EXAM	F&S	I	
Topic 25									
Mathirai: Swasakudori Mathirai (Major)									
CO1,CO2,CO	Demonstrate the method of preparation of Swasakudori mathirai	PSY-	MK	SH	PT	P-EXAM	F&S	I	

3		GUD							
Topic 26									
Urai Mathirai (Major)									
CO1,CO2,CO 3	Demonstrate the method of preparation of Urai mathirai	PSY- GUD	MK	SH	PRA	P-EXAM	F&S	I	
Topic 27									
Murukkan Vithai Mathirai (Major)									
CO1,CO2,CO 3	Demonstrate the method of preparation of Murukkan vithai mathirai	PSY- GUD	MK	SH	PRA	P-EXAM	F&S	II	
Topic 28									
Santha Sandhrodhaya Mathirai (Major)									
CO1,CO2,CO 3	Demonstrate the method of preparation of Santha sandhrodhaya mathirai	PSY- GUD	MK	SH	PT	P-EXAM	F&S	II	
Topic 29									
Kadugu: Nunaa Kadugu (Minor)									

CO4	Demonstrate the Preparation of Nunaa kadugu	PSY-SET	MK	SH	PT	P-EXAM,OSPE	F&S	II	
Topic 30 Thenooral: Nellikai Thenooral (Minor)									
CO1,CO2,CO3	Demonstrate the preparation of Nellikai Thenooral	PSY-GUD	DK	SH	DIS,PT	P-EXAM,PA	F&S	II	
Topic 31 Theeneer: Oma Theeneer (Major)									
CO1,CO2,CO3	Demonstrate the method of preparation of Oma theeneer	PSY-GUD	DK	KH	TBL	P-PRF	F	II	
Topic 32 Sanga Dravagam (Major)									
CO1,CO2,CO3	Demonstrate the method of preparation of Sanga Dravagam	PSY-GUD	DK	KH	TBL	CL-PR	F	II	
Topic 33									

Mezhugu: Kariyuppu Mezhugu (Major)									
CO1,CO2,CO 3	Demonstrate the method of preparation of Kariyuppu mezhugu	PSY- GUD	MK	SH	PT	P-EXAM	F&S	II	
Topic 34									
Kanthi Mezhugu (Major)									
CO1,CO2,CO 3	Demonstrate the method of preparation of Kanthi mezhugu	PSY- GUD	MK	SH	PT	CL-PR	F	II	
Topic 35									
Kuzhambu : Jathi Jambheera Kuzhambu (Major)									
CO1,CO2,CO 3	Demonstrate the method of preparation of Jathi jambheera kuzhambu	PSY- GUD	MK	SH	PT	P-EXAM	F&S	II	
Topic 36									
Pathangam :Rasa Pathangam (Major)									
CO1,CO2,CO 3,CO7	Demonstrate the method of preparation of Rasa pathangam	PSY- GUD	DK	KH	PRA	PRN	F	II	H- GMM

Topic 37									
Chenduram : Annabedhi Chenduram (Major)									
CO1,CO2,CO3,CO7	Demonstrate the method of preparation of Annabedhi chenduram	PSY-GUD	MK	SH	PT	P-PRF	F&S	II	
Topic 38									
Padiga Linga Thuvar (Major)									
CO1,CO2,CO3,CO7	Demonstrate the method of preparation of Padiga linga thuvar	PSY-GUD	MK	SH	PT	P-EXAM	F&S	II	
Topic 39									
Arumuga Chenduram (Major)									
CO1,CO2,CO3,CO6,CO7	Demonstrate the method of preparation of Arumuga chenduram	PSY-GUD	DK	KH	PT	P-PRF,OSPE	F	II	
Topic 40									
Parpam: Kungiliya Parpam (Major)									
CO1,CO2,CO3	Demonstrate the method of preparation of Kungiliya parpam	PSY-	MK	SH	PRA	P-EXAM	F&S	II	

3,CO7		GUD							
Topic 41									
Silasathu Parpam (Major)									
CO1,CO2,CO3,CO7	Demonstrate the method of preparation of Silasathu parpam	PSY-GUD	MK	SH	PT	P-EXAM,OSPE	F&S	II	
Topic 42									
Kattu : Linga Kattu (Major)									
CO1,CO2,CO3,CO7	Demonstrate the method of preparation of Linga kattu	PSY-GUD	MK	SH	PRA	P-EXAM	F&S	II	
Topic 43									
Chunnam :Vedyuppu Chunnam (Major)									
CO1,CO2,CO3,CO6,CO7	Demonstrate the method of preparation of Vedyuppu chunnam	PSY-GUD	DK	SH	PT	P-PRF	F	II	
Topic 44									
Karpam :Irunelli Karpam (Major)									

CO1,CO2,CO 3	Demonstrate the method of preparation of Irunelli karpam	PSY- GUD	MK	KH	PT	PRN	F	II	
Topic 45 Chaththu :Nayuruvi Uppu (Major)									
CO1,CO2,CO 3	Demonstrate the method of preparation of Nayuruvi uppu	PSY- GUD	DK	KH	PT	PRN,OSPE	F	II	H- GMM
Topic 46 Patru :Padikaara Patru (Minor)									
CO1,CO2,CO 3	Demonstrate the Preparation of the Padikaara Patru	PSY- GUD	MK	SH	PRA	P-EXAM	F&S	III	
Topic 47 Otradam :Thazhuthaalai Ottradam or Aamanakku Ilai or Puli ilai Ottradam (Preparation of Kizhi Using Herbals) (Minor)									
CO1,CO2,CO 3	Demonstration the Preparation of Kizhi- Thazhuthaalai Ottradam or Amanakku Ilai or Puliylilai Ottradam	PSY- GUD	MK	SH	DIS,P RA	P-EXAM,P- PRF	F&S	III	
Topic 48 Pochu :Neerkovai Mathirai (Major)									

CO1,CO2,CO 3	Demonstrate the method of preparation of Neerkovai maathirai	PSY- GUD	MK	SH	PT	P-EXAM	F&S	III	
Topic 49 Pottanam :Oma Pottanam (Minor)									
CO1,CO2,CO 3	Demonstrate the preparation of Oma Pottanam	PSY- GUD	MK	K	DIS,P T	P-EXAM,INT	F&S	III	
Topic 50 Thiri :Vetrilai Manjal Thiri (Minor)									
CO1,CO2,CO 3	Prepare Vetrilai Manjal Thiri	PSY- MEC	MK	SH	PT	P-EXAM	F&S	III	
Topic 51 Kalikkam :Ilaneer Kuzhambu (Major)									
CO1,CO2,CO 3	Demonstrate the preparation of Ilaneer Kuzhambu	AFT- RES	DK	SH	PT	P-PRF	F	III	
Topic 52									

Nasiyam :Mooku Thuli (Major)

CO1,CO2,CO 3	Demonstrate of preparation of Mooku Thuli	PSY- SET	DK	K	DIS,P T	P-EXAM,SA	F&S	III	
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Topic 53**Aakiraanam : Thumbai Ver Aakiraana podi (Minor)**

CO1,CO2,CO 3	Demonstrate the preparation of Thumbai Ver Aakiraana podi	PSY- GUD	MK	SH	DIS,P T	P-EXAM,SA	F&S	III	
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Topic 54**Kalimbu :Vanga Vennai (Minor)**

CO1,CO2,CO 3	Demonstrate the preparation of Vanga Vennai	PSY- GUD	MK	SH	PT	P-EXAM	F&S	III	
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Topic 55**Neer : Anda Neer (Minor)**

CO1,CO2,CO 3	Demonstrate the preparation of Anda Neer	PSY- GUD	MK	SH	DIS,P RA	P-EXAM	F	III	
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Topic 56									
Pasai : Karpogi Pasai (Major)									
CO1,CO2,CO 3	Demonstrate the preparation of Karbogi Pasai	PSY- GUD	MK	SH	PT	P-EXAM	F&S	III	
Topic 57									
Thalaivali Pasai (Minor)									
CO1,CO2,CO 3	Demonstrate the preparation of the Thalaivali Pasai	PSY- GUD	MK	SH	SDL, PT	P-EXAM,SA	F&S	III	
Topic 58									
Kali :Oomathai Kali (Minor)									
CO1,CO2,CO 3	Demonstrate the preparation of Oomathai Kali	PSY- GUD	MK	SH	DIS,P RA	P-EXAM,P- PRF	F&S	III	
Topic 59									
Podi :Pal Podi (Minor)									
CO1,CO2,CO	Demonstrate the Preparation of Pal Podi	PSY-	MK	SH	DIS,P	P-EXAM,SA	F&S	III	

3		SET			T				
Topic 60									
Karam :Pun Podi (Major)									
CO1,CO2,CO3,CO5	Demonstrate the method of preparation of Pun Podi	PSY-GUD	MK	SH	PT	P-EXAM	F&S	III	
Topic 61									
Cheyaneer :Vedyuppu Cheyaneer (Major)									
CO1,CO2,CO3,CO5	Demonstrate the preparation of Vedyuppu Cheyaneer	AFT-VAL	MK	SH	PT	P-PRF,OSPE	F	III	
Topic 62									
Vaippu murai: Indhuppu Vaippu (Major)									
CO1,CO2,CO3	Demonstrate the method of Indhuppu vaippu	AFT-VAL	MK	SH	PT	P-PRF,OSPE	F	III	H-GMM
Topic 63									
Siddha cosmetics: Handmade Soap (Major)									

CO1,CO2,CO 3	Demonstrate the method of preparation of Hand made soap	PSY- GUD	DK	KH	TPW	P-PRF	F	III	
Topic 64									
Herbal Shampoo (Major)									
CO1,CO2,CO 3	Demonstrate the process of preparation of Herbal Shampoo	PSY- GUD	DK	SH	PT	P-PRF	F	III	
Topic 65									
Face Pack (Major)									
CO1,CO2,CO 3,CO5	Preparation of a face pack	AFT- VAL	DK	SH	PT	P-PRF	F&S	III	
Topic 66									
Face Cream (Major)									
CO1,CO2,CO 3,CO5	Demonstrate the preparation of Face Cream	AFT- VAL	DK	SH	PT	P-PRF	F	III	

Table 4a: List of Practical

S.No	Name of practical	Term	Activity	Practical hrs
1	Surasam: Inji Surasam (Minor)	1	Extraction of juice and warming	2
2	Charu:Kattrazhai Charu (Minor)	1	Extraction of juice using astringent	2
3	Kudineer: Arathai Kudineer (Minor)	1	Preparation of concoction using boiling method	2
4	Maanthathukku Karukku Kudineer (Major)	1	Prepare concoction by charring the ingredients and boiling by adding appropriate quantity of water	2
5	Karkam:Keezhanelli Karkam (Minor)	1	Ground into a paste	2
6	Utkali:Kadugu Utkali(Minor)	1	Rice flour and mustard powder are kneaded with water and boiled to utkali patham	2
7	Adai:Kalyana Murungai Adai (Minor)	1	Leaves are added to rice flour and ground properly by adding small quantity of water and baked in hot oven after adding ghee	2
8	Chooranam:Nilavagai Chooranam(Major)	1	The dried raw drugs are purified separately, pounded separately, sieved and mixed according to the prescribed ratio, with or without adding sugar	2
9	Indhuppu Chooranam (Major)	1	The dried raw drugs are purified separately, pounded separately, sieved and mixed according to the prescribed ratio	2
10	Vadagam:Thalisadhi Vadagam (Major)	1	The raw drugs are made into fine powder individually, filtered through a cloth and mixed homogenously. Palm sugar or jaggery is then added. An earthen pot is taken and equal volume of cow's milk and water are poured into the pot. The mouth of the pot is covered with cloth. The drugs mixed as said above, are placed on it and covered with a mud pan. The pot is then heated until the milk is completely evaporated. Then it is ground and rolled into small pills.	2

11	Vennai: Kungiliya Vennai (Major)	1	The raw drugs are powdered well, placed in a ladle, added with gingelly oil, and heated. And poured into a vessel containing water then it is churned well to get vennai(butter) consistency	2
12	Manappagu: Adathodai Manappagu (Major)	1	Leaves are made into decoction and then boiled by adding sugar or jaggery till a sweet aromatic odour comes. ie. Manappagu consistency and allow it to cool.	2
13	Nei:Senkottai Nei (Major)	1	Senkottai are cut into small pieces and discard the kernel. Boil them in one-third of the quantity of milk and boil. Recover the milk. Similarly treat the remaining milk also and recover it. Mix all the 3 portions of treated milk and add an equal volume of item 3 and boil to make nei.	2
14	Rasayanam: Inji Rasayanam (Major)	1	A type of medicine in semi-solid form which is prepared by adding sugar and ghee to a Chooranam prepared from certain raw drugs	2
15	Kandhaga Rasayanam (Major)	1	A type of medicine in a semi-solid form that is prepared by adding sugar, honey, and ghee to a Chooranam prepared from certain raw drugs.	4
16	Ilakam: Pancha Deepakini Ilakam (Major)	1	A medicine that is prepared by heating milk with the addition of sugar or jaggery till a thick syrupy consistency is reached. At that stage, the specific raw drug powders are added and mixed well after which ghee is mixed, and the mixture is cooled and then honey is added and preserved.	2
17	Kesari Ilakam (Major)	1	A medicine that is prepared by heating juices with the addition of sugar till a thick syrupy consistency is reached. At that stage, the specific drug powders are added and mixed well with ghee.	2
18	Anda ilakam (Major)	1	A medicine that is prepared by adding egg white yolk, lemon juice and sugar and heating till a thick syrupy consistency is reached. At that stage, the specific drug powders are added and	2

			mixed well after which ghee is mixed, and the mixture is cooled and then honey is added and preserved.	
19	Ennai: Anda Thailam (Major)	1	Boiled egg yolks are charred and the oil is collected	2
20	Pinda Thailam (Major)	1	Oily medication is prepared by boiling decoctions and paste of raw materials with oil.	2
21	Moolakudara Ennai (Minor)	1	Oily medications prepared by grinding raw drug with oil	2
22	Mathan Thailam (Major)	1	Oily medications are prepared by boiling herbal juice and powdered raw drug or minerals with oil.	2
23	Sirattai Thailam (Major)	1	Raw drugs are placed in Kuzhi thyla karuvi, surrounded by cow dung cakes, burnt and oil is extracted	4
24	Kandhaga Sudar Thailam (Major)	1	The raw drugs are ground with specified nei, applied over a piece of cloth, made into wicks rolled, and tied at the tip of the Sudar thalia karuvi, burnt, flaming drops from it are collected in a porcelain vessel.	2
25	Mathirai: Swasakudori Mathirai (Major)	1	The raw drugs are triturated with the floral part and they are rolled into different sizes of pills, dried and stored	2
26	Urai Mathirai (Major)	1	The raw drugs are triturated then rolled into different sizes of pills, dried and stored	4
27	Murukkan Vithai Mathirai (Major)	2	The raw drugs are triturated with water and they are rolled into different sizes of pills, dried and stored	4
28	Santha Sandhrodhaya Mathirai (Major)	2	The raw drugs are triturated with lemon juice and they are rolled into different sizes of pills, dried and stored	4

29	Kadugu: Nunaa Kadugu (Minor)	2	The raw drugs are added to oil and boiled till mustard like granules or sediments form.	2
30	Thenooral: Nellikai Thenooral (Minor)	2	Indian gooseberry are steamed and made into small pieces and it is soaked in honey or jaggery syrup.	2
31	Theeneer: Oma Theeneer (Major)	2	This is the process in which the drugs are boiled with water in a special distillation pot. The vapour of the medicated water is cooled and collected	6
32	Sanga Dravagam (Major)	2	Combine the component, convert into powder, charge in the still and collect distillate	6
33	Mezhugu: Kariyuppu Mezhugu (Major)	2	Certain substances are slowly heated by adding juices little by little and made into a waxy consistency and ground well	4
34	Kanthi Mezhugu (Major)	2	Obtained by grinding certain mineral compound with some herbal juices till it reaches waxy consistency.	6
35	Kuzhambu : Jathi Jambheera Kuzhambu (Major)	2	A mixture of some juice and finely powdered mercurial compound taken in a vessel, then added to powder of raw drug slowly, heated and taken in a semi solid form.	2
36	Pathangam :Rasa Pathangam (Major)	2	Pathagam is a sublimate prepared from inorganic substances by using a special sublimation apparatus	6
37	Chenduram : Annabedhi Chenduram (Major)	2	Pashanam are ground with lemon juice and made into small cakes, dried under sunlight and also subjected to incineration using cow dung cakes (pudam process) finally taken as chendhooram having red colour	4
38	Padiga Linga Thuvar (Major)	2	Pashanam and karasaram are ground with decoction (araippu process)	2

39	Arumuga Chenduram (Major)	2	Purified raw drugs are powdered, ground with aloe vera juice and incinerated.	12
40	Parpam: Kungiliya Parpam (Major)	2	Purified raw drugs are ground and made into white neeru	2
41	Silasathu Parpam (Major)	2	Raw drug is covered with limestone (kavasam) ,dried then subjected to pudam process and made into white neeru	4
42	Kattu : Linga Kattu (Major)	2	It is a process where the mercurial and the arsenic compounds, are converted into consolidate which are stable to fire and unbreakable.	2
43	Chunnam :Vediyuppu Chunnam (Major)	2	Prepare Vediyuppu Jayaneer and add other ingredients kept in an earthen vessel and burnt until the moisture content evaporates completely.	4
44	Karpam :Irunelli Karpam (Major)	2	Grind paashanam with herbal juice in small quantities, then dry and powder	2
45	Chaththu :Nayuruvi Uppu (Major)	2	Raw drugs are made into ash, mixed with water,allowed to settle, and the clear solution is separated and boiled till it reaches salt sedimentation state.	6
46	Patru :Padikaara Patru (Minor)	3	Certain raw drugs are powdered and certain raw drugs are ground with specific juice, mixed, and boiled in a ladle and made a poultice.	2
47	Otradam :Thazhuthaalai Ottradam or Aamanakku Ilai or Puli ilai Ottradam (Preparation of Kizhi Using Herbals) (Minor)	3	Raw drugs or leaves are fried in oil and made into bundle	2
48	Poochu :Neerkovai Mathirai (Major)	3	The raw drugs are triturated with the juice and they are rolled into different sizes of pills, dried, and stored.	2

49	Pottanam :Oma Pottanam (Minor)	3	Raw drugs are powdered, soaked in herbal juice, then add camphor and made into pouches	2
50	Thiri :Vettilai Manjal Thiri (Minor)	3	Thiri is prepared by soaking gauze in or smearing gauze with herbal juices / decoctions / substances that are ground well with herbal juices / decoctions and made as wick	2
51	Kalikkam :Ilaneer Kuzhambu (Major)	3	Raw drugs are powdered and boiled in tender coconut water into Kuzambu consistency	4
52	Nasiyam :Mooku Thuli (Major)	3	Pulverize the raw drug add water and boil until it reduces to half the amount , filter for 5 to 6 times and preserved.	2
53	Aakiraanam : Thumbai Ver Aakiraana podi (Minor)	3	Raw drugs are dried, finely powdered and sieved in cloth	2
54	Kalimbu :Vanga Vennai (Minor)	3	Raw drugs are ground with butter and preserved	2
55	Neer : Anda Neer (Minor)	3	Boiled egg is taken, yolk removed, cavity filled with sugar candy and the liquid is collected	2
56	Pasai : Karpogi Pasai (Major)	3	Raw drugs are powdered and ground into paste consistency	4
57	Thalaivali Pasai (Minor)	3	Raw drugs are powdered and heated with oil till it melts, then add wax and camphor and preserved in a closed vessel	2
58	Kali :Oomathai Kali (Minor)	3	Rice flour and leaves are taken in equal amounts,ground,kneaded with water, and boiled to kali patham	2
59	Podi :Pal Podi (Minor)	3	Raw drugs are powdered and mixed well.	2
60	Karam :Pun Podi (Major)	3	Purified Kanthagam is stuffed in ummathai fruit and it is covered with cow dung and dried, subjected to pudam process with two cow dung cakes, and allowed to cool,thorns over the fruit	4

			are removed,ground with four parts of Thulasi leaves,dried, and taken	
61	Cheyaneer :Vediyuppu Cheyaneer (Major)	3	Vediyuppu and old tamarind are taken in specified proportions, ground and made in to villai , burnt ,powdered and it is mixed with equal amount of Navacharam and placed in dew and the liquid obtained is collected	2
62	Vaippu murai: Indhuppu Vaippu (Major)	3	Sea water is boiled and the salt is extracted,then the salt is heated and melted, in this stage add vediyuppu,padikaram and pooneru and they are melted together, then allowed to cool and taken.	4
63	Siddha cosmetics: Handmade Soap (Major)	3	1 Coconut oil - 98 Parts 2 Castor oil -2 Parts 3 Neem leaf juice -38 Parts 4 Sodium Hydroxide pellets -16Parts 5 Rose oil -Qs 6 BHT -0.05 Parts 1 Weigh oils and pour them into the main mixing vessel. 2 Weigh the Water extract into the mixing Vessel. 3 Add Sodium hydroxide to water extract with gentle mixing. Ensure complete dissolution. 4 Heat it mildly. 5 Continue mixing. 6 Add needed floral oils 7 Transfer the bulk to trays once the trace point is arrived. 8 Allow it to stand for 2-3 days 9 Cut into desired shapes.	4
64	Herbal Shampoo (Major)	3	1 .Aloe vera juice -Qs to 100 Parts 2 .Hibiscus flower extract -10 Parts 3 .Fenugreek extract -10 Parts 4 .Nellikai extract- 10Parts 5 .Alkyl poly glucoside -30 Parts 6 .Cocamidopropyl betaine- 10 Parts 7 .EDTA - disodium salt -0.1 Parts 8 .Xanthan gum -0.3 Parts 9 .Phenoxyethanol -0.9 Parts 10. Perfume - 0.8 Parts 11 .Colour -Q.S	4

			<p>12 .Sodium Hydroxide -Q.S</p> <p>Manufacturing Process : Weigh items 1- 6 in main mixer .Mix well for 30 minutes.Continue mixing till the end of process Add 7-8 . Ensure complete mixing. Add balance ingredients . Mix for 15 minutes. Stop mixing and transfer to specific containers.</p>	
65	Face Pack (Major)	3	<p>1. Multani mitti -Qs to 100 Parts 2 .Aloe Vera -5 Parts 3 .Turmeric -3 Parts 4 .Aavarai -10 Parts 5 .Neem -4 Parts 6 .Tulsi - 2 Parts 7 .Manjitti -3 Parts 8 .Vettiver -3 Parts 9 .Kasthuri manjal -10 Parts</p> <p>Manufacturing Process : Grind items 1 to 9 into a fine powder and sieve it. Weigh item 1 to the mixer. Start mixing. Add the rest of the items 2-9 (in powder form) one after the other and continue to mix for 20 minutes. Stop mixing. Sieve the powder and store</p>	4
66	Face Cream (Major)	3	<p>1. Stearic acid- 15 Parts 2. Manchatty extract in coconut oil -5 Parts 3. Turmeric extract in coconut oil -3 Parts 4. Rose water -10 Parts 5. Aloe vera juice -Q.S to 100 Parts 6. Potassium hydroxide -0.41 Parts 7. Glycerine -5 Parts 8. Xanthan gum- 0.2 Parts 9. Phenoxyethanol- 0.9 Parts 10. Saffron oil - Q.S 11. Colour- Q.S</p> <p>Manufacturing Process : Weigh items 1-3 in the oil phase heating vessel. Heat to 80[^]c. Ensure complete dissolution of ingredients.</p>	4

			<p>Weigh items 4-6 in a main mixing vessel. Mix well. Maintain 80^oc.</p> <p>Run down the oil phase into the main mixer. Mix for 15 minutes. Continue mixing throughout the process.</p> <p>Start cooling.</p> <p>Premix 7-8 and add at 40^oc.</p> <p>Add items 9-11 in the same order below 38^oc.</p> <p>Stop mixing and cooling at 37^oc and preserved</p>	
			Total Hr	196

Activity

CO	Topic name	Activity Details	Hours#
CO1,CO3	Preparation of Sathu	Hands on Training : Ask students to split into groups. Make them to collect the plants and do the necessary process to extract sathu(uppu)	10 hours
CO1,CO3	<i>Maarana prayogam</i> and Preparation of <i>Kajjali</i>	Hands on Training : Students will be first asked to go through the procedure, accordingly they will be asked to collect the required raw drugs. The teacher will explain the method.The student will prepare the medicine	3 hrs
CO2,CO3	Siddha cosmetics:Hair wash powder,Hair oil,Kann mai	Workshop on Siddha Cosmetics : Divide students into groups of 20.Each group has to prepare different type of hair wash powder,different type of hair oil and kann mai(Kajal) using different ingredients and formulations.They can use innovations and thier own formulations	14 hrs
CO2,CO6	Dispensing pharmacy	Survey on Dispensing Pharmacy Ask the students to visit the hospital and observe the prescriptions of various patients and collect the data in the log book and submit in the	4 hrs

		<p>following format.</p> <ul style="list-style-type: none"> • Name of disease • Age of patient • Name of medicine • Dosage • Adjuvant • Pathiyam • Medical abbreviations • Duration of therapy for 10 different diseases 	
CO1,CO6	Adjuvant and Indications for any Medicine	<p>Organize Puzzle for adjuvant and indication : Small cards are taken and names of higher order medicine or any parpam or chenthuram is written.The names of ajuvant is written in a similar colour.The names of indications written in another colour card.All the cards will be jumbled.</p> <p>The students will be asked to solve the puzzle by matching the cards and solving the puzzle in a given time.This will improve thier memory and co ordination.</p>	2 hrs
CO3	Alavugal-Siddha Metrics	<p>Conduct Quiz:</p> <p>One small student group will prepare questions .Other students split into two groups.The students who prepared questions will conduct quiz on alavugal by comparing alavugal with modern metrics.</p>	2 hrs
CO2,CO3,CO4,CO5	GMP certified Pharmaceutical company	<p>Field visit to Pharmaceutical company:</p> <p>First students are split into 20 member group.One teacher assigned to accompany each group.They will be instructed to follow rules and regulations to enter into the premises.They will wear the cap, mask and foot cover.They should not touch any machinery.They should take notes wherever applicable.This documentaion should be produced after field visit by the students.</p>	6 Hrs
CO2,CO3,CO4	Good Laboratory Practice (GLP) certified Drug Testing Laboratory	<p>Field visit to DTL</p> <p>Students will be grouped in teams. The DTL experts will explain about the instruments and how it is applicable in drug standarisation</p>	6 Hrs

	methods.They will learn the expansion terms of the sophisticated machines and working principle	
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Hours indicated are included in calculations of Table 3 and 4

Table 5- Teaching learning method

Sr No	Teaching learning methods in the course	No of Activities
1	Lecture	15
2	Lecture with Power point presentation	13
3	Lecture & Group Discussion	12
4	Lecture with Video clips	17
5	Discussions	8
6	Brainstorming	5
7	Inquiry-Based Learning	2
8	PBL	3
9	Project-Based Learning	2
10	TBL	4
11	Flipped classroom	1
12	Blended Learning	2
13	Edutainment	1
14	Mobile learning	1
15	ECE	7
16	Self-directed learning	3
17	Kinesthetic Learning	1
18	Demo on Model	2
19	Library Session	1
20	Peer learning	1
21	Real life experience	1
22	Recitation	1
23	Practical	1

24	Drug analysis	1
25	Demonstration	8
26	Demonstration Lab	1
27	Field visit	3
28	Activity	5
29	Practical	1

Table 6: Assessment Summary: Assessment is subdivided in A to H points

6 A-Number of Papers and Marks Distribution

Subject Code	Papers	Theory	Practical/Clinical Assessment				Sub Total	Grand Total
			Practical	Viva	Elective	IA		
SIDUG – GMK	2	200	100	20	10 (Set-SB)	20	150	350

6 B - Scheme of Assessment (formative and Summative)

PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
	First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
Second	3 PA & First TT	3 PA & Second TT	3 PA & UE

PA: Periodical Assessment; **TT:** Term Test; **UE**:** University Examinations.

** University Examination shall be on entire syllabus

6 C - Calculation Method for Internal assessment Marks

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT
	A	B	C	D	E	F	G
	1 (20)	2 (20)	3 (20)	Average (A+B+C/3) (20)	Term Test (MCQ+SAQ+LAQ and Practical) (Converted to 20)	Sub Total	Term Assessment
FIRST						D+E	(D+E)/2
SECOND						D+E	(D+E)/2
THIRD					NIL		D
Final IA	Average of Three Term Assessment Marks as Shown in 'G' Column.						
	<p>* Select an Evaluation Methods which is appropriate for the objectives of Topics from the Table 6 D. Convert it to 20 marks.</p> <p>** Conduct Theory (100 Marks) (MCQ (20*1 Marks), SAQ (8*5), LAQ (4*10)) and Practical (100 Marks) Then convert to 20 Marks.</p>						

6 D - Evaluation Methods for Periodical Assessment

S. No	Evaluation Methods
1	Practical / Clinical Performance
2	Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
3	Open Book Test (Problem Based)
4	Summary Writing (Research Papers/ Samhitas)
5	Class Presentations; Work Book Maintenance
6	Problem Based Assignment
7	Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)
8	Extra-curricular Activities, (Social Work, Public Awareness, Surveillance Activities, Sports or Other Activities which may be decided by the department).

9	Small Project
10	Activities Indicated in Table 3 - Column G3 as per Indicated I, II or III term in column I3 & I4

6 E Question Paper Pattern

II PROFESSIONAL B.S.M.S EXAMINATIONS

SIDUG – GMK

PAPER-1

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

		Number of Questions	Marks per question	Total Marks
Q 1	MULTIPLE CHOICE QUESTIONS (MCQ)	20	1	20
Q 2	SHORT ANSWER QUESTIONS (SAQ)	8	5	40
Q 3	LONG ANSWER QUESTIONS (LAQ)	4	10	40
				100

Similar for Paper II

6 F Distribution of theory examination

Paper 1						
Sr. No	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
1	1. Pharmacy	1	17	Yes	Yes	Yes
2	2.Marunthu& Dosage schedule	1	8	Yes	Yes	No
3	3.Alavugal (Measurements)& Principles of Drug Preparation	1	8	Yes	Yes	No
4	4.Instrumentation	2	13	Yes	Yes	No
5	5.Muppu (Siddha Elixir) and Thogai charakukal	2	12	Yes	No	Yes
6	6.Formulations as per Gunapadam Mooligai Vaguppu	2	13	Yes	Yes	No
7	7.Formulations As Per Siddha Formulary of India (SFI) (Paper I)	3	29	Yes	Yes	Yes

Total Marks	100	
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Paper 2						
Sr. No	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
8	1. Formulations as per Siddha Formulary of India (SFI) (Paper II)	1	36	Yes	Yes	Yes
9	2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu	2	41	Yes	Yes	Yes
10	3.Pathiyam, Anubanam & Thunai Marunthu	3	8	Yes	Yes	No
11	4.Drug Standardization	3	9	Yes	Yes	No
12	5.Recent Advances in Pharmaceutics	3	6	Yes	Yes	No
Total Marks			100			

6 G Blue print of paper I & II

Paper No:1		
Question No	Type of Question	Question Paper Format
Q1	<p>Multiple choice Questions 20 Questions 1 mark each All compulsory</p> <p>Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ</p>	<ol style="list-style-type: none"> 1. 1. Pharmacy 2. 1. Pharmacy 3. 2.Marunthu& Dosage schedule 4. 2.Marunthu& Dosage schedule 5. 2.Marunthu& Dosage schedule 6. 3.Alavugal (Measurements)& Principles of Drug Preparation 7. 3.Alavugal (Measurements)& Principles of Drug Preparation 8. 3.Alavugal (Measurements)& Principles of Drug Preparation 9. 4.Instrumentation 10. 4.Instrumentation 11. 4.Instrumentation 12. 5.Muppu (Siddha Elixir) and Thogai charakukal 13. 5.Muppu (Siddha Elixir) and Thogai charakukal 14. 6.Formulations as per Gunapadam Mooligai Vaguppu 15. 6.Formulations as per Gunapadam Mooligai Vaguppu 16. 6.Formulations as per Gunapadam Mooligai Vaguppu 17. 7.Formulations As Per Siddha Formulary of India (SFI) (Paper I) 18. 7.Formulations As Per Siddha Formulary

		<p>of India (SFI) (Paper I)</p> <p>19. 7. Formulations As Per Siddha Formulary of India (SFI) (Paper I)</p> <p>20. 7. Formulations As Per Siddha Formulary of India (SFI) (Paper I)</p>
Q2	<p>Short answer Questions Eight Questions 5 Marks Each All compulsory</p> <p>Must know - 7 SAQ Desirable to know - 1 SAQ No questions on Nice to know</p>	<p>1. 1. Pharmacy</p> <p>2. 2. Marunthu & Dosage schedule</p> <p>3. 3. Alavugal (Measurements) & Principles of Drug Preparation</p> <p>4. 4. Instrumentation</p> <p>5. 4. Instrumentation</p> <p>6. 6. Formulations as per Gunapadam Mooligai Vaguppu</p> <p>7. 6. Formulations as per Gunapadam Mooligai Vaguppu</p> <p>8. 7. Formulations As Per Siddha Formulary of India (SFI) (Paper I)</p>
Q3	<p>Long answer Questions Four Questions 10 marks each All compulsory</p> <p>All questions on must know. No Questions on Nice to know and Desirable to know</p>	<p>1. 1. Pharmacy</p> <p>2. 5. Muppu (Siddha Elixir) and Thogai charakukal</p> <p>3. 7. Formulations As Per Siddha Formulary of India (SFI) (Paper I)</p> <p>4. 7. Formulations As Per Siddha Formulary of India (SFI) (Paper I)</p>

Paper No:2		
Question No	Type of Question	Question Paper Format
Q1	<p>Multiple choice Questions 20 Questions 1 mark each All compulsory</p> <p>Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ</p>	<ol style="list-style-type: none"> 1. 1. Formulations as per Siddha Formulary of India (SFI) (Paper II) 2. 1. Formulations as per Siddha Formulary of India (SFI) (Paper II) 3. 1. Formulations as per Siddha Formulary of India (SFI) (Paper II) 4. 1. Formulations as per Siddha Formulary of India (SFI) (Paper II) 5. 1. Formulations as per Siddha Formulary of India (SFI) (Paper II) 6. 1. Formulations as per Siddha Formulary of India (SFI) (Paper II) 7. 2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu 8. 2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu 9. 2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu 10. 2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu 11. 2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu 12. 2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu 13. 3.Pathiyam, Anubanam & Thunai Marunthu 14. 3.Pathiyam, Anubanam & Thunai Marunthu 15. 3.Pathiyam, Anubanam & Thunai Marunthu

		<p>16. 4. Drug Standardization</p> <p>17. 4. Drug Standardization</p> <p>18. 4. Drug Standardization</p> <p>19. 4. Drug Standardization</p> <p>20. 5. Recent Advances in Pharmaceutics</p>
Q2	<p>Short answer Questions Eight Questions 5 Marks Each All compulsory</p> <p>Must know - 7 SAQ Desirable to know - 1 SAQ No questions on Nice to know</p>	<p>1. 1. Formulations as per Siddha Formulary of India (SFI) (Paper II)</p> <p>2. 1. Formulations as per Siddha Formulary of India (SFI) (Paper II)</p> <p>3. 2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu</p> <p>4. 2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu</p> <p>5. 2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu</p> <p>6. 3. Pathiyam, Anubanam & Thunai Marunthu</p> <p>7. 5. Recent Advances in Pharmaceutics</p> <p>8. 4. Drug Standardization</p>
Q3	<p>Long answer Questions Four Questions 10 marks each All compulsory</p> <p>All questions on must know. No Questions on Nice to know and Desirable to know</p>	<p>1. 2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu</p> <p>2. 2. Formulations as per Gunapadam Thathu & Jeeva Vaguppu</p> <p>3. 1. Formulations as per Siddha Formulary of India (SFI) (Paper II)</p> <p>4. 1. Formulations as per Siddha Formulary</p>

6 H Distribution of Practical Exam

S.No	Heads	Marks
1	<p>Major Practical (Duration : 01 hr 30 mins)</p> <ul style="list-style-type: none">• Selection of ingredients with proportions - 5 marks• Selection of required Equipment/ Instruments - 5 marks• Preparation steps as per SOP -15 Marks• Demonstration of Patham/ Pakkuvam of finished medicine - 5 marks• Onsite viva during practical -10 marks <p>List of Major Practicals</p> <ul style="list-style-type: none">• Maanthathukku Karukku Kudineer• Nilavagai Chooranam• Indhuppu Chooranam• Thalisedhi Vadagam• Kungiliya Vennai• Adathodai Manappagu• Senkottai Nei• Inji Rasayanam• Kandhaga Rasayanam• Pancha Deepakini Ilakam• Kesari Ilakam• Anda ilakam• Anda Thailam• Pinda Thailam• Mathan Thailam• Kandhaga Sudar Thailam• Swasakudori Mathirai• Urai Mathirai• Murukkan Vithai Mathirai• Santha Sandhrodhaya Mathirai• Kariyuppu Mezhugu• Jathi Jambheera Kuzhambu• Annabedhi Chenduram• Padiga Linga Thuvar• Kungiliya Parpam• Silasathu Parpam• Linga Kattu• Neerkovai Mathirai• Karpogi Pasai• Pun Podi• Face Pack	40

2	<p>Minor Practical (Duration: 30 mins)</p> <ul style="list-style-type: none"> • Selection of ingredients with proportions - 5 marks • Preparation steps as per SOP -5 Marks • Demonstration of Patham/ Pakkuvam of finished products - 5 marks • Onsite viva during practicals -5 marks <p>List of Minor Practicals</p> <ul style="list-style-type: none"> • Inji Surasam • Kattrazhai Charu • Arathai Kudineer • Keezhanelli Karkam • Kadugu Utkali • Kalyana Murungai Adai • Moolakudara Ennai • Nunaa Kadugu • Nellikkai Thenooral • Padikaara Patru • Thazhuthaalai Ottradam or Aamanakku Ilai or Puli ilai Ottradam • Oma Pottanam • Vetilai Manjal Thiri • Mooku Thuli • Thumbai Ver Aakiraana podi • Vanga Vennai • Thalaivali Pasai • Oomathai Kali • Pal Podi . 	20
3	<p>Spotters (Select any 05 among these) Each carries 6 marks (Duration: 30 mins)</p> <ul style="list-style-type: none"> • Application of Ph Meter • Tablet Hardness Tester. • Refractometer • Sieve Analyser. • Test for Parpam (Traditional testing Method) • Test for Chenduram.(Traditional testing Method) • Test for Chunnam(Traditional testing Method) • Macroscopic appearance, surface character ,colour,markings texture or feel,odour,particle size,appearance of cut surface (if applicable) for anyone of the Internal Medicines from the list (Chooranam, Ilakam, Thailam, Mathirai, Manapagu, Mezhuagu, Nei, Parpam, Chendooram. 	30

4	Record	10
5	Viva	20
6	Electives (Set-SB)	10
7	Internal Assesment	20
Total Marks		150

References Books/ Resources

S.No	Book	Resources
1	Gunapadam Mooligai	K.S.Murugesu Mudhaliyar, Directorate Of Indian Medicine and Homeopathy, Chennai-106.
2	Gunapadam Thathu Jeeva Vaguppu	Dr.R.Thiagarajan, Directorate Of Indian Medicine and Homeopathy, Chennai-106
3	Gunapadam Jeeva Vaguppu	Dr.R.Thiagarajan Revised edition by Dr.I.Sornamariammal Directorate of Indian Medicine and Homeopathy,Chennai-600106
4	Marunthu Sei Iyalum Kalaiyum	Dr. Deva Asirvatham Samuel, Directorate Of Indian Medicine and Homeopathy ,Chennai-106.
5	Siddha Formulary of India	Part I & II, Published by Govt.of India
6	Siddha Vaidhya Thirattu	Dr. K.S.Uthamarayan
7	Siddha Maruthuvanga churukkam	Dr.K.S.Uthamarayan-Directorate Of Indian Medicine and Homeopathy,Chennai-106
8	Siddha Marunthakiyal - Vithikalum Sei Muraikalum	Dr.I.Sornamariyammal-Directorate Of Indian Medicine and Homeopathy ,Chennai-106
9	Gunapadam Thathu -Thathukalin Vilakkamum Marunthu Muraikalum	Dr.I.Sornamariyammal-Retd Joint Director,Directorate Of Indian Medicine and Homeopathy, Chennai-106
10	Aga,Pura Marunthukalin Ilakkanamum Vilakkamum	Dr.I.Sornamariyammal
11	Theraiyar Yamaga Venba	Directorate Of Indian Medicine and Homeopathy, Chennai-106
12	Theraiyar Thylavarka Churukkam	Subramania Pandithar,Publisher:Dr. Vijaya Ragavan,INTERNATIONAL INSTITUTE OF TAMIL STUDIES,THARAMANI,CHENNAI 600113

13	Theriar Kudineer (Moolamum Uraiyum)	Ayurvedha and Siddha Central Research Institute New Delhi-1996
14	Theriyar Seharappa	Second edition:2011, Siddha Central Research Institute,New Delhi 110058
15	Gunapadam-Marunthakkaviyal-I	(Pharmaceuticals Paper-I), Dr.S.Suresh M.D(S)-Today Publication,No.192,Bells road,S.R.Complex,Chepauk,Chennai
16	Indian Materia Medica	Volumes 1 & 2, Dr. K.M. NADKARNI'S.
17	Kannusamy Parambarai Vaithiyam	Rathna Nayakar & sons, Paryys corner.
18	The Siddha Pharmacopoeia of India,	Part I, Volume II, First Edition, Department of AYUSH, Govt. of India.
19	Online resource	https://archive.org/details/siddha-formulary-of-india-part-1/page/n5/mode/1up
20	Siddha system of Medicine -The Science of Holistic health	Ministry of Ayush -Govt of India: 2019
21	Rasavatha Manjari	P.Muhamad Abdulla Sahibu-(1909) Muslim Abimani Achiyanthirasalai,Chennai.
22	Siddhargal Rasavatha Kalai	M.S.Subramaniyam ,Publishers -Thamarai noolagam ,Vadapalani,Chennai - 28
23	Siddha Materia Medica-Mineral and Animal origin	Directorate of Indian Medicine and Homeopathy Chennai 600106
24	Nano Medicine Basics	K Raja & M Kannan Subramanian, K S, Textbook on Fundamentals and Applications of Nanotechnology,First edition 2020, Daya Publishing House
25	FSSAI Act Basics	Food Safety And Standards Act, 2006 Bare Acts Kamal Publishers Lawman Series Latest Edition 2022

26	Quality Control	Quality Control Standards for certain Siddha formulations, CCRAS (Ministry of Health and Family welfare) GoI, New Delhi, 1991
27	Pharmacoepidemiology basics	Brain L. Strom, Text book of Pharmacoepidemiology , Second edition 2013 Publisher John Wiley & Sons Ltd. ISBN 978-1-118-34486-6
28	An aproach to new drug development	free e book- https://books.google.com
29	TKDL	csir.res.in/documents/tkdl
30	Pharmacoeconomics	Chakraborty,Chiranjib&A.Bhattacharya
31	Pharmacogenomics	Loralie J. Langman, First Edition, Pharmacogenomics in Clinical Therapeutics,2012, Publisher John Wiley & Sons Ltd.
32	Pharmacogenetics	Pharmacogenetics, 2005, Publisher Council for International Organizations of Medical Sciences (CIOMS), Genva.
33	Pharmacoeconomics	Karen L. Rascati, PhD , Essentials of Pharmacoeconomics, Second edition , published by 2014 Lippincott Williams & Wilkins, a Wolters Kluwer. ISBN 978-1-4511-7593-6 (paperback).
34	ISM (2001) National Formulary Of Unhand Medicine	Ed 1,Part III,pp 59-68,115-117, Department of Indian Medicine and Homeopathy, Ministry of health and Family Welfare,Govt.of India,New Delhi
35	Agathiyar Vaidya Vallathi - 600	Second Edition - 2005 Central Council Of Research in Ayurveda &Siddha
36	Pathartha Guna Sinthamani	Edition: 2022 Directorate of Indian Medicine & Homeopathy

37	Drug and cosmetics act	Law Relating To Drugs And Cosmetics With Free Cd by Vijay Malik, Eastern Book Company, 26th Edition, 2018
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Abbreviations

Domain

S.No	Short form	Descriptions
1	CK	Cognitive/Knowledge
2	CC	Cognitive/Comprehension
3	CAP	Cognitive/Application
4	CAN	Cognitive/Analysis
5	CS	Cognitive/Synthesis
6	CE	Cognitive/Evaluation
7	PSY-SET	Psychomotor/Set
8	PSY-GUD	Psychomotor/Guided response
9	PSY-MEC	Psychomotor/Mechanism
10	PSY-ADT	Psychomotor Adaptation
11	PSY-ORG	Psychomotor/Origination
12	AFT-REC	Affective/ Receiving
13	AFT-RES	Affective/Responding
14	AFT-VAL	Affective/Valuing
15	AFT-SET	Affective/Organization
16	AFT-CHR	Affective/ characterization

T L method

S.No	Short form	Descriptions
1	L	Lecture
2	L&PPT	Lecture with Power point presentation
3	L&GD	Lecture & Group Discussion
4	L_VC	Lecture with Video clips
5	DIS	Discussions
6	BS	Brainstorming
7	IBL	Inquiry-Based Learning
8	PBL	PBL
9	CBL	CBL
10	PrBL	Project-Based Learning
11	TBL	TBL
12	TPW	Team project work
13	FC	Flipped classroom
14	BL	Blended Learning
15	EDU	Edutainment
16	ML	Mobile learning
17	ECE	ECE
18	SIM	Simulation
19	RP	Role plays
20	SDL	Self-directed learning
21	PSM	Problem solving method
22	KL	Kinesthetic Learning
23	W	Workshops
24	GBL	Game-Based Learning
25	D-M	Demo on Model

26	LS	Library Session
27	PL	Peer learning
28	RLE	Real life experience
29	REC	Recitation
30	SY	Symposium
31	TUT	Tutorial
32	PER	Presentations
33	PT	Practical
34	XRay	X ray identification
35	CD	Case diagnosis
36	LRI	Lab report interpretation
37	DA	Drug analysis
38	D	Demonstration
39	D_BED	Demonstration bedside
40	D_L	Demonstration Lab
41	DG	Demonstration Garden
42	FV	Field visit
43	ACT	Activity
44	PRA	Practical

Assessment

S.No	Short form	Descriptions
1	T-EMI	Theory extended matching item
2	T- EW	Theory Essay writing
3	T- MEQs	Theory MEQs
4	T-CRQs	Theory CRQs
5	T-CS	Theory case study
6	T-OBT	Theory open book test
7	P-VIVA	Practical Viva
8	P-REC	Practical Recitation
9	P-EXAM	Practical exam
10	PRN	Presentation
11	P-PRF	Practical Performance
12	P-SUR	Practical Survey
13	P-EN	Practical enact
14	P-RP	Practical Role play
15	P-MOD	Practical Model
16	P-POS	Practical Poster
17	P-CASE	Practical Case taking
18	P-ID	Practical identification
19	P-PS	Practical Problem solving
20	QZ	Quiz
21	PUZ	Puzzles
22	CL-PR	Class Presentation,
23	DEB	Debate
24	WP	Word puzzle
25	O-QZ	Online quiz

26	O-GAME	Online game-based assessment
27	M-MOD	Making of Model
28	M-CHT	Making of Charts
29	M-POS	Making of Posters
30	C-INT	Conducting interview
31	INT	Interactions
32	CR-RED	Critical reading papers
33	CR-W	Creativity Writing
34	C-VC	Clinical video cases,
35	SP	Simulated patients
36	PM	Patient management problems
37	CHK	Checklists
38	OSCE	OSCE
39	OSPE	OSPE,
40	Mini-CEX	Mini-CEX
41	DOPS	DOPS
42	CWS	CWS
43	RS	Rating scales
44	RK	Record keeping
45	COM	Compilations
46	Portfolios	Portfolios
47	Log book	Log book
48	TR	Trainers report
49	SA	Self-assessment
50	PA	Peer assessment
51	360D	360-degree evaluation
52	NFE	Not for exam