



# महाराष्ट्र आरोग्य विज्ञान विद्यापीठ, नाशिक

MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

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पीएच्.डी., एफएसीबीआय

कुलसचिव

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जा. क्र. मआवि/ई.३/१८/पदवी/४४२८

महत्वाचे/तातडीचे

दि.११/१२/२०१३

प्रति,  
प्राचार्य / अधिष्ठाता,  
सर्व संलग्नित आयुर्वेद महाविद्यालये,  
मआवि, नाशिक.

विषय : सुधारित द्वितीय वर्ष बी.ए.एम.एस. अभ्यासक्रम लागू करणेबाबत...

- संदर्भ : १) भा.चि.के.प. यांचे पत्र क्र.२८-१४/२०१२-युजी सिलॅबस दि.१९/०८/२०१३,  
२) दि.३०/०९/२०१३ रोजीच्या अभ्यासमंडळाच्या बैठकीतील ठराव क्र.०२/२०१३,  
३) दि.०१/१०/२०१३ रोजीच्या विद्याशाखेच्या बैठकीतील ठराव क्र.०२/२०१३,  
४) दि.२९/१०/२०१३ रोजीच्या विद्यापरिषदेच्या बैठकीतील ठराव क्र.३९२/२०१३,  
५) विद्यापीठ पत्र क्र. मआवि/ई.३/१८/पदवी/४९५४, दि.०६/१२/२०१२,

महोदय / महोदया,

उपरोक्त विषय व संदर्भाच्या अनुषंगाने आपणास कळविण्यात येते की, विद्यापीठाने दि.०३/११/२०१२ रोजी झालेल्या अभ्यासमंडळाच्या बैठकीतील ठराव क्र.०१/२०१२ अन्वये व विद्याशाखेच्या दि.०३/१२/२०१२ रोजीच्या बैठकीतील ठराव क्र.०१/२०१२ नुसार आपणास यापूर्वी विद्यापीठचे उक्त संदर्भीय पत्र क्र. ५ अन्वये सुधारित बी.ए.एम.एस. (आयुर्वेदाचार्य) शैक्षणिक वर्ष २०१२-१३ पासून प्रथम वर्षामध्ये प्रवेशित विद्यार्थ्यांना लागू केल्याबाबत कळविलेले आहे.

शैक्षणिक वर्ष २०१२-१३ मध्ये प्रथम वर्षासाठी प्रवेशित विद्यार्थी शैक्षणिक वर्ष २०१३-१४ मध्ये द्वितीय वर्षात प्रवेशित होत असल्याने त्यांना द्वितीय वर्षाचा अभ्यासक्रम लागू करणे आवश्यक आहे. यास्तव, विद्यापरिषदेच्या उपरोक्त ठरावानुसार द्वितीय वर्षाचा बी.ए.एम.एस. अभ्यासक्रम खाली नमूद केल्याप्रमाणे लागू करण्यात येत आहे. सदर द्वितीय वर्षाचा अभ्यासक्रमाची प्रत विद्यापीठाच्या संकेतस्थळावर प्रसिध्द करण्यात आलेली आहे.

सदरचा द्वितीय वर्षाचा बी.ए.एम.एस. अभ्यासक्रम ज्या विद्यार्थ्यांनी शैक्षणिक वर्ष २०१२-१३ अंतर्गत प्रथम बी.ए.एम.एस. वर्षात प्रवेश घेऊन विद्यापीठाची जुलै/ऑगस्ट २०१३, प्रथम बी.ए.एम.एस. परिक्षा उत्तीर्ण केली व द्वितीय वर्ष बी.ए.एम.एस. वर्षात प्रवेश घेतला या विद्यार्थी तुकडीपासून लागू राहिल याची नोंद घ्यावी.

सदर बाबत महाविद्यालय स्तरावर त्वरीत यथायोग्य कार्यवाही करण्यात यावी व सर्व संबंधितांना उपरोक्त बाब अवगत करण्यास्तव सदर पत्रास सुचनाफलकावर प्रसिध्दी देण्यात यावी.

कुलसचिव

(कृ.मा.प.)

- प्रत :- १) परीक्षा नियंत्रक, मआविवि, नाशिक  
२) अधिष्ठाता, आयुर्वेद व युनानि विद्याशाखा, मआविवि, नाशिक  
३) संगणक विभागप्रमुख, मआविवि, नाशिक

: यांनी सदर पत्र व अभ्यासक्रमाची प्रत विद्यापीठाच्या संकेतस्थळावर प्रसिध्दीकरिता आवश्यक कार्यवाही करावी.

# **Second Year BAMS syllabus**

## **One Year Course**

**Batch – Admitted in 2012**

**Subjects for 2<sup>nd</sup> B.A.M.S.**

**A) RASASHASTRA EVAM BHAISHAJYA KALPANA**

**B) DRAVYAGUNA VIJNAN**

**C) AGADTANTRA, VYAVAHAR-AYURVED EVUM VIDHIVAIDYAK**

**D) CHARAKASAMHITA -PURVARDHA**

# RASASHASTRA EVAM BHAISHAJYAKALPANA

## (IATROCHEMISTRY AND AYURVEDIC PHARMACEUTICS)

Theory -Two Papers  
Practical :-

Total Marks- 200  
Total Marks-200

Teaching hours-200  
Teaching hours-200

Paper – 1  
First Term

RASASHASTRA  
Part A 50 Marks

100 Marks

- 01 Definition and etymology of Rasa, History of Rasashastra, Importance of Rasaushadhi, Concept of Rasa-Rasayana, Concept of Raseshwar Darshana. Concept of Rasashala and Rasamandap.
- 02 Brief Description and Application of Technical terminologies (Paribhasha): Avapa, Nirvapa, Dhalana, Bhavana, Jarana, Murchana, Shodhana, Marana, Amrutikarana, Lohitikarana, MrutaLoha, SatwaPatana, Druti, Apunarbhava, Niruttha, Rekhapurna, Varitara.
- 03 DravyaVarga: Amlavarga, Panchamrittika, Panchagavya, Panchamrita, Ksharashtaka, Dravakagana, Mitrapanchaka, Raktavarga, Lavanapanchaka.
- 04 Brief description of Yantras and their application UlukhalaYantra, KhalwaYantra, KachhapaYantra, DamaruYantra - VidhyadharaYantra- Urdhwapatan, Addhapatan&TiryakpatanaYantra, JaranarthaTulayantra, Dolayantra, Patalayantra, PalikaYantra, BalukaYantra, BhudharaYantra, SthaliYantra, SwedanaYantra.
- 05 Brief description & application of Musha (Crucible): SamanyaMusha, Gostanimusha, VajraMusha, Mahamusha, Yoga musha, VrintakaMusha, Malla / Pakwamusha. Different types of crucibles e.g. Silica crucible, platinum crucible. Mudra and SandhiBandhana.
- 06 Brief description & applications of Chullika, SatwapatanaKoshthi, PatalaKoshthi, GaraKoshthi, Angarakoshthi and knowledge of various heating appliances viz. Gas stove, Hot plate, Heating mantle, Induction Stove, Hot Air Oven, Blower.
- 07 Concept, definition and types of Puta: Suryaputa, Chandraputa, Gomayaputa, Lawakaputa, Kukkutaputa, Kapotaputa, Varahaputa, Gajaputa, Mahaputa, Kumbhaputa, Valukaputa, Bhudharaputa, Applications of Electric muffle furnace and fuel (diesel) dependent furnace. Brief introduction to thermocouple and pyrometer.
- 08 Parada: Synonyms, Knowledge Occurrence, natural and artificial sources of Parada, Hingulotthaparada, Types of Parada, ParadaDosha: Naisargika, Yougika, Aupadhika (Kanchuka). Grahya-Agrahya Parada, Paradagati, Paradabandha, Shodhana of Parada. Paradasanskara and brief description of Ashtasamskara.
- 09 Concept of Murchhana and Jarana of Parada, Preparation of Kajjali, Classification of Rasaushadhi: Khalvi rasa e.g. TribhuvanaKeerti Rasa, Parpati Rasa- Rasa Parpati, Kupipakva Rasa- Rasa sindur, Pottali rasa - Hemagarbhapottali. Rasa sevanavidhi and pathya and apathya.
- 10 Brief introduction of quality control, standardization and GMP of Rasaoushadhies.

## Second Term

### Part B

50 marks

- 01 Occurrence, Synonyms, Mineralogical identification, Sources, Types, Grahya and Agrahyata, Shodhana, Marana and other processing techniques. Properties, dose, anupan and therapeutic uses, pathya – apathya and ashuddha, apakwa and avidheesevanjanyadosha and its management, important formulations of the following:
- 02 **Maharasa** – Abhraka (Biotite Mica), Vaikrantha, Makshika (Chalco-pyrite), Vimala (Iron Pyrite), Shilajatu, Sasyaka (Peacock ore), Chapala and Rasaka (Sphalerite).
- 03 **Uparasa** – Gandhaka (Sulfur), Gairika (Red Ochre), Kasisa (Green Vitriol), Kankshi (Alum), Haratala (Orpiment), Manahshila (Realgar), Anjana and Kankustha.
- 04 **Sadharana Rasa** – Kampillaka, Gauripashana (Arsenic oxide), Navasagara (Ammonium chloride), Kaparda (Cowry), Agnijara, GiriSindura (Red oxide of Hg), Hingula (Red Cinnabar) and Mriddarashringa (Litharge).
- 05 **Dhatu** - Swarna (Gold), Rajata (Silver), Tamra (Copper), Loha (Iron), Vanga (Tin), Naga (Lead), Yashada (Zinc), Kamsya (Bronze), Pittala (Brass), Vartaloha. Dhatu - grahasambandha.
- 06 **Ratna** - Manikya (Ruby), Mukta (Pearl), Pravala (Coral), Tarkshya (Emerald), Pushparaga (Topaz), Vajra (Diamond), Nilam (Sapphire), Gomeda (Zircon or Cinnamome stone), Vaidurya (Cats eye). Ratnapariksha, Ratnadosha, Ratna-graha sambandha.
- 07 **Uparatna**- Vaikranta (Tourmaline), Suryakanta (Sun stone), Chandrakanta (Moon stone), Rajavarta (Lapis lazuli), Perojaka (Turquoise), Sphatikamani (Quartz), Trinakanta, Palanka, Putika, Rudhir.
- 08 **Sudhavarga** – Sudha (Lime stone), Kaparda (Cowries), Shukti (Oyster Shell), Shankh Conch Shell, Mrigashringa (Stag horn), Khatika, Godanti (Gypsum) and Samudraphena (Cattle Fish bone), Kukkutandatwak (Hen's Egg Shell).
- 09 **Sikatavarga** - Sikata (Silica), Dugdhapashana (Talc), Nagapashana / Jaharmohara (Serpentine), Badarshama (silicate of lime), Vyomashma (Sangeyashab - Jade), Kousheyashma (Asbestos) and Akika (Agate).
- 10 **Ksharavarga** - Sarjakshara (Sodium bicarbonate), Yavakshara, Tankanakshara (Borax), Surya Kshara (Potassium Nitrate).
- 11 **Miscellaneous** - Mandura, Bola, Dam-ul Akhawayan (Raktabandhini), Kasturi, Bhoonag, Mayurpiccha, Sarjarasa, Madhoochishta, Updhatu.
- 12 **Visha and Upavisha**-Introduction, collection and storage, classification, synonyms, shodhana, antidote, therapeutic and toxic doses, anupan, therapeutic uses, and formulations of following Visha and Upavisha-Vatsanabha, Kuchala, Jayapala, Dhattura, Bhanga, Bhallataka, Gunja, Arka, Snuhi, Langali, Karaveera, Ahiphena and Chitrakmool.
- 13 **Aushadhi Yoga Gyanam- ingredients, manufacturing process, and bhesajprayogvidhi.** ArogyaVardhiniGutika, Kasturibhairava Rasa, Kumara Kalyana Rasa, Garbhapala Rasa, ChandraprabhaVati, Chandramrita Rasa, Pratapalankeshwara Rasa, Pravalapanchamrita Rasa, Anandbhairava Rasa, Yogendra Rasa, Laxmivilas Rasa, Vasantakusumakara, Vasantamalati Rasa, BrihatVataChintamani Rasa, Shankhavati, Shwaskuthara Rasa, Hinguleswara Rasa, Hemagarbhapottali, Hridyarnava Rasa,

Swarnavanga, Makaradhwaja, PutapakwavaishamJwarantakaLoha, Vatvidhvamsan Rasa, Kamadugha Rasa, Laghusutshekhar Rasa, NavayasaLoha, SaptamritaLoha, TamraParpati, PanchamritaParpati, SvetaParpati.

13 Introduction to pharamcovigilance and its status in India, with reference to Ayurvedicdrugs.

### Term-wise distribution of syllabus.

		Syllabus Point No.
First Term	Part A	1,2,3,4,5,6,7,8,9,10
Second Term	Part B	1,2,3,4,5,6,7,8,9,10,11,12,13

## Rasashastra :Practicals<sup>100 Marks</sup>

**Minimum Twenty five practicals to be performed.(Minimum one from each group)**

**Group Name of Group  
NO.**

**Name of the Practical**

1. Rasa [Parada]

SamanyaShodhana of Parada  
Kajjali

2. Maharasavarga

Mugdha rasa  
Shodhana of Abhraka  
Dhanyabhrakanirman  
Shodhana of Makshika  
Shodhana of Shilajatu  
Shodhana of Sasyaka.

3. Uparasavarga

Shodhana of Gandhaka  
Shodhana of Gairika  
Shodhana of Kasisa  
Shodhana of Kankshi  
Shodhana of Haratala  
Rasa manikyanirman  
Shodana of Manashila

<b>4. Sadharana rasa varga</b>	Shodhana of Hingula Sodhana of Navasadar
<b>5. SudhaVarga</b>	Shodhana of Kapardika Shodhana of Shankha Shodhana of Shukti Shodhana of Pravalamula Shodhana of Godanti
<b>6. Dhatuvarga</b>	SamanyaShodhana of Lauha Shodhana of Mandura SamanyaShodhana of Tamra Shodhana of Naga Shodhana of Vanga Shodhana of Yashada
<b>7. KsharaVarga</b>	Shodhana of Tankana
<b>8. Parpati</b>	Preparation of Rasaparpati, Bola Parpati and Swetaparpati
<b>9. Vishavarga</b>	Shodhana of Vatsanabha, Bhallataka, Kupilu, Dhatturabeeja, Jayapala, Gunja, Chitrakamoola.

### **Minimum 11 PRACTICAL FOR DEMONSTRATION / GROUP PRACTICALS**

**1.**Hinguladrasakrishti (HingulotthaParada).

**2.**Bhasma: 4 (One from each group)

i.Abhrakabhasma, SwarnaMakshikabhasma, Tamrabhasma

ii.Vangabhasma, Naga bhasma, Yashadabhasma

iii.Mandurabhasma, Kasisabhasma

iv.Shankhabhasma, Kapardikabhasma, Godantibhasma.

**3.**Pishti :(Minimum One)1 Pravalapishti, Jaharmohara / Akikapishti,

Trina kanthamanipishti, Muktapishti.

**4.**Druti : 1 Gandhakadruti.

5. Formulations 4 (one from each group)
- Rasasindura, Swarnavanga, Sameer pannaga rasa
  - Saptamrutalauha, Punarnavamandura, Navayasalauha
  - Agnitundivati, Tribhuvanakirti rasa, Sootshekhara rasa, Laghusutashekhara Rasa
  - Arogyavardhinivati, Laghumalinivasanta rasa, Hinguleshwar rasa, Anandbhairav rasa, Rajapravartinivati

Paper – 2  
First Term

BHAISHAJYA KALPANA  
Part A

100 Marks  
50 Marks

- History and Chronological (kramikavikasa) development** of Bhaishajyakalpana. Concept of Aushadha and Bhesajya.
- Fundamental principles of BhaishajyaKalpana**
- Study of Ancient and Contemporary systems of 'Maana' (Units of measurement), Shushka -ardra –drava- dravyagrahanniyam** (Rules of measures of dry, fresh, liquid drugs); Grahyagrahyatva, Nava Purandravyagrahanniyam.
- Guidelines and Methods of collection, storage, preservation of Aushadhidravya. Concept of Saviryatavadhi (shelf life) and stability in ancient and contemporary science.
- Bhesajprayogavidhi :AushadhaMatra, Anupana and sahapan and Aushadhsevanakaala. (Posology).**
- P Panchavidhakashayakalpana and Other kalpana** : Kashaya Yoni, Swarasa, Kalka, Kwatha, Hima and Phanta, Pramathya, Aushadha siddha paniya, Tandulodaka, Laksha rasa, Mantha, Panaka, Arka, Churna, Rasakriya, Ghana, Phanita, Avaleha, Prasha, Gudapaka, Sharkara, Syrups, Ksheerapaka, Satva, Guggulukalpana, Vati, Gutti, Pinda, Modaka, Varti Preparation of Tablets, pills, capsule and Suppositories. Masikalpana, Lavanakalpana, Ksharakalpana and Kshara sutra.
- Introduction and general knowledge of useful instruments/ Equipments -** Disintegrator, Mixer, Grinder, End Runner, Edge Runner, Sieve-Shaker, Granulator, Tableting machine, Pill making machines, coating and polishing pan, capsule filling machine, sieves and mesh.
- Snehakalpana** : Sneha yoni, Types of Sneha, Snehamurchanavidhi, Snehapakavidhi, patrapaka, types and their use. Sneha siddhi lakshana, dose, Preparation and uses of TriphalaGhrita, Bramhighrita, Narayanataila, Anutaila.
- SandhanaKalpana and its types:** MadyaKalpana, Asava, Arishta, Sura (Prasanna - Kadambari - Medaka - Jagala - Bakkasa), Maireya, Surasava, Shukta, Kanjika, Sauviraka, Tushodaka, Sidhukalpana their methods of preparation, siddhi lakshana, properties, uses, doses. Takrarishta, Draksharishta, Ashokarishta, Dashamoolarishta, Kumaryasava, Chandanasava.



- 10 **Kritanna and AushadhisiddhaannaKalpana:** Definition of Kritanna, Concept of Pathya and Apathya, Yavagu –types of yavagu, Manda, Peya, Vilepi, Anna, Bhakta, Odan, Yush-types, Krishara, Mansa rasa, Vesavara, KhadKamblika, Raga, Shadava, Dadhi and TakraVarga – Takra, Udasvita, Katvar, Mathita, Chhachika.

**Second Term**

**Part B**

**50 Marks**

- 1 **Bahyopachararthakalpana (External Applications)-Lepa** -Types of Lepa, methods of preparation and mode of application. Udvartan and Avachurnan, Method of preparation of SikthaTaila, Malahara – SarjarasaMalahara, GandhakMalahara, Upanaha, Atasiupanaha, Shatadhouta and SahastradhoutaGhrita. Brief introduction of semi solid dosage forms- Ointments, Creams, Emulsions, Gels, Lotions.
- 2.1 **Principles and precautions for preparation of formulations of Netraupachararthakalpan (Ophthalmic preparations)** – Seka, Drava, Pindi, Anjana - Ashchytana - Tarpana - Putapaka and Vidalaka, Methods of preparation of eye drops, eye ointments.
- 2.2 **Principles and precautions for preparation of formulations ofNasyopachararthKalpana** - Classification of Nasya, Navana, Avapidana, Pradhaman, Marsha and Pratimarshanasya.
- 2.3 **Principles and precautions for preparation of formulations ofClassification of dhumpaan**, Method of preparation of dhumvarti and it's therapeutic uses. Dhupan: Vranadhupan, arshodhupan.
- 2.4 **Principles and precautions for preparation of formulations ofGandoosha** - Kavala - Pratisaran, Tooth paste, Tooth powders and Mouth wash.
- 2.5 **Principles and precautions for preparation of formulations ofBastikalpana**- Classification, Method of preparation of Niruha and Anuvasana, Basti Therapeutic properties and uses of Basti.
- 3 Brief knowledge of Standardization of Ayurvedic formulations- Kasthaushadhi.
- 4 Brief introduction of Drug and Cosmetics Act 1940 and Rules 1945.
- 5 Concept of, AushadhiNirmanshala, with respect to Good Manufacturing Practices (GMP) in accordance to Schedule T.

**Term-wise distribution of syllabus.**

		Syllabus Point No.
First Term	Part A	1,2,3,4,5,6,7,8,9,10
Second Term	Part B	1,2.1,2.2,2.3,2.4,2.5,3,4,5

**Following practicals to be performed- (Minimum one from each category)**

Method of preparation, therapeutic uses, dose and anupana of the following

Group No.	Name of the Practical
1.	Swarasa- Ardrakaswarasa, Tulasiswarasa, KumariSwarasa, Vasa putapakaswarasa
2.	Kalka- Nimbakalka, Rasonakalka.
3.	Kwatha- Punarnavasthakakwatha, RasnaSapthakakwatha, Kulatthakwath.
4.	Hima- Dhanyakahima, Sarivadihima .
5.	Phanta- Panchakolaphanta, Yastimadhu Phanta.
6.	Pramathya- Mustadipramathya
7.	Mantha- Kharjuradimantha
8.	Aushadh siddha paniya- Shadangapaniya
9.	Laksha Rasa.
10.	Arka - Yavaniarka, Gulabarka, Misreyaarka
11.	Panaka- Chinchapanaka, Chandanpanaka.
12.	Sharkara- Banapshasharkara, Nimbusarkara.
13.	Churna- SitopaladiChurna, HinguwashtakaChurna.
14.	Gutika- ChitrakadiGutika, SanjivaniVati.
15.	Guggulu-Triphala Guggulu, KaishoraGuggulu.
16.	Avaleha- Chyavanaprashavaleha, Vasavaleha, VyaghriHaritakiavaleha, Manibadraavaleha.
17.	Rasa kriya - DarviRasakriya, Guduchi Ghana, Kutaja Ghana.
18.	Khanda- Haridrakhanda, Narikelakhanda, Sowbhagyashuntipaka
19.	Satva- Amrutasatva,
20.	Varti- Phalavarti, Chandrodayavarthi
21.	Lavana- Arkalavana, Narikelalavana
22.	Masi- Triphalamasi, MayurpicchaMasi
23.	Ksheerapaka- Arjunaksheerapaka, Rasonaksheerapaka, ShunthiKsheerapaka
24.	Kshara- Apamargakshara, Snuhikshara, Ksharasutra. .

25. Manda, Peya, Vilepi, Yavagu, Krishra, Vesavara
26. Yusha - Mudgayusha, Saptamushtikayusha, Kulatthayusha
27. Arishta- Kutajarishta, Takrarishta .
28. Asava - Kumaryasava, Kanakasava
29. Suktakalpana- Kanji
30. Udaka- Tandulodaka
31. Upanaha- AtasiUpanaha
32. SikthaTailaNirmaan
33. Malahara- Sarjarasamalahara, Gandakamalahara, Cream, Emulsion.
34. SnehaKalpana - SnehaMurchhana - GhritaMurchana, TailaMoorchhana,  
Ghritakalpana: Jatyadighrita, Triphalaghrita, ksheerashatphalaghrita  
Taila kalpana-Panchaguna taila, Arkataila, Balataila, Jatyaditaila
35. Tailapatana- Bhallatakatailapatana, Jayapalatailapatana
36. Shodhana- Guggulu, Hingu.

## **II. Visit of minimum three GMP approved Ayurvedic manufacturing units**

Pharmacy visit report should include following points.

1. Name
2. Address
3. Date of Visit
4. Area
5. Number of employee
6. Drugs –
7. Turnover
8. Sections –1. Raw material
  2. Pharmcognosy Unit
  3. Grinding Unit
  4. Tablet Making/ Capsule/ granulating unit
  5. Taila/ Ghruta/ Kwatha/ Syrup/Asava-Arishta/Avaleha
  6. Quality control
  7. Packaging Unit
  8. Finished product s storage
  9. Dispatch Unit

## Exam Pattern

### Internal Assessment and University Theory Paper Pattern

Question Number	Specification Of Question	Total Number of Questions	Number of Questions to be compulsory	Marks For each question	Total marks
01	Short Answer Question	06	05	3	15
02	Short Answer Question	07	06	5	30
03	Long Answer Question	4	3	15	45
					90 marks

### University Practical Examination Pattern

Spotting	Rasa Practical	Bhaishjya Practical	Viva	Journal	Formulations*	Total marks
30 marks	30 Marks	30 Marks	60 marks	20 marks	10 Marks	180 Marks

**\*Indicate two formulations one formulation from Rasashastra and one from BhaishjyaKalpana**

**Drug Formulation Report should include following points.**

Importance of Title, Ingredients, Equipments, method of preparation, modification if any, uses with pharmacological action, precaution, any observations, conclusions, textual reference with short bibliography, inprocess photographs.

### Internal Assessment Practical Examination Pattern

Spotting	Rasa Practical	Bhaishjya Practical	Viva	Journal	Total marks
20 marks	15 Marks	15 Marks	30 marks	10 marks	90 marks

## रसशास्त्र व भैषज्य कल्पना प्रात्यक्षिक पुस्तिका नमुना

प्रयोग क्रमांक :

दिनांक

प्रयोगाचे नाव :

संदर्भ  ग्रंथाधार :

उपकरणे :

घटकद्रव्ये :

क्रं.	द्रव्याचेनाव	प्रमाण	क्रं.	द्रव्याचेनाव	प्रमाण

प्रयोगविधी

:

कल्पसिध्दी लक्षणे :

निरिक्षण :

दक्षता :

प्राप्तप्रमाण :

न्युनता :

अधिकता :

औषधीपरिक्षा :

१.	रूप
२.	रस
३.	गंध
४.	स्पर्श
५.	शब्द

शास्त्रीय

परिक्षा विधी :

आकृती :

उपयोग :

क्रं.	रोगाचेनाव	अपेक्षितकर्म	मात्रा	अनुपान	सेवनकाल

मुल्यनिर्धारण :

१. कच्ची औषधे	
२. उर्जाव्यय <input type="checkbox"/> इंधनखर्च <input type="checkbox"/>	
३. श्रम मुल्य	
४. पैकिंग चार्जेस	
एकूणकिंमत	

औषधाचेनाव :

ग्रंथाधार :

मात्रा :

निर्मिती दिनांक :

सवीर्यतावधी समाप्ती दिनांक :

विद्यार्थ्याचेनाव :

अध्यापक स्वाक्षरी :

## Reference Books

1. Adyatan Rasa Shastra
  2. Abhinav Rasa Shastra
  3. Asava Arishta Vigyanam
  4. Ayurvediya Rasa Shastra (Sachitra)
  5. Ayurvediya Rasa Shastra
  6. Rasa Bhaishajya Paribhasa
  7. Ayurvediya Rasa Shastra
  8. Ayurved Prakash
  9. Drugs and Cosmetic Act – 1940
  10. Paka Darpana
  11. The Paka-darpana of King Nala
  12. Parada Vigyaniam
  13. Pratyaksha Aushadh Nirmanam
  14. Bhaishjyaka Kalpana Vigyanam
  15. Rasa Tarangini
  16. Rasa Darpan
  17. Rasa Bindu
  20. Rasa Bhaishajya Kalpana Vigyan Vaidya
  21. Rasa Mitra
  22. Rasa Ratna Samuchchaya (Hindi)
  23. Rasaratna Samuchchaya-
  24. Rasaratna Samuchchaya -
  25. Rasa Shastra Prayogiki Srivastava,
  26. Rasamritam
  25. Rasayan Sara
  26. Rasendra Sampradaya
  27. Rasendra Sara Sangraha
  29. Vaidyak Paribhasa Pradeep (Hindi Translation)
  30. Sharangadhara Samhita
  31. Bharatiya Bhaishajya Kalpana Vigyana
  32. Bhaishajya Kalpana Vijnanam
  33. Rasa Shastra (English)
  34. Rasa Ratna Samuchchaya (English)
  35. Rasendra Chintamani (Hindi)
  36. Ayurvedic formulary of India
  38. Ayurvedic Pharmacopiea of India , CCRAS
  39. Bhaishjya Kalpana Vigyan
  40. Textbook of Rasashastra
- R.K. Goyal  
Vaidya Somadev Sharma  
Dr. Pakshdhar Jha  
Chandrabhusan Jha  
Badrinarayan Pandey  
Sureshananda Thapaliyal  
Prof. Siddhi Nandan Mishra  
Vaidya Gujrat Mishra
- Dr. Indradev Tripathi  
Dr. Madhulika critical study  
Vasudev M. Dwivedi  
Acharya Vishwanath Dwivedi  
Dr. Agnihotri  
Sadanand Sharma  
Prof. Bhajan Das Swami  
Dr. Sanjay Sharma  
Santosh Kumar Khandal  
Dr. Tryambak Nath Sharma  
Dattatreya Ananta Kulkarni.  
Ambika Dattashastri  
Damodar Joshi  
Yadav and Prof. Ramesh Saxena  
Vaidya Yadavji Tirkramji Acharya  
Vaidya Shyam Sunderacharya Vaishya  
Vaidya Hajari Lal Sukul  
Vaidya Gopal Krishna  
Dr. Indradev Tripathi  
Dr. Radhakrishna Parashar  
Gananath Vishwanath Dwivedi  
Dr. K Ramachandra Reddy  
Prof. Damodar Joshi  
Prof. Damodar Joshi  
Prof. Siddhinandan Mishra
- Siddhi Nandan Mishra  
Dr. K Ramachandra Reddy.

- |  |   |
|--|---|
| 41.AshadhayogaVigyanam                             | Dr. K. Ramachandrareddy                 |
| 42.VaidyakaParibhashaPradipa (Enlgish Translation) | Dr. K. Ramachndra Reddy & Dr. P. Suresh |
| 43.Relevant parts of Brihatrayee                   |   |
| 44.Text book of BhaishjyaKalpana -                 | DrShobha G Hiremath                     |
| 45.Text Book of Rasa Shastra                       | Dr P H C Murthy                         |
| 46.Rasa Chandashu                                  | Prof S SSavirkar (CCRAS Publication)    |
| 47 .BhaishjyaRatnawali                             | Prof S N Mishra                         |
| 48 Yoga Ratnakar                                   |   |

# DRAVYAGUNA VIJNAN

(PHARMACOLOGY & MATERIA MEDICA)

Lectures: 200 Hrs.

Practicals: 200 Hrs.

Total Marks -400

Theory Two Papers– 100 Marks Each

Practical/Viva voce – 200 Marks

Paper I

100 Marks

Part A

50 Marks

**1- Dravyaguna Shastra Paribhasa-** Lakshana of Sapta Padartha of Dravyaguna Vijnana viz Dravya-Rasa-Guna- Virya- Vipaka- Prabhava and Karma.

**2- Dravya:**

Etymological derivation, definition, panchbhoutikatwa.

Classification of Dravya according to Samhitas and Nighantus Taxonomical classification.

**3- Guna:**

Etymological derivation, definition and Classification of Guna. Detailed knowledge of Gurvadi Guna & Paradi gunas.

**4- Rasa:**

Etymological derivation, definition, Meaning of "Rasa" in various contexts. Shad Rasas

(Madhura, Amla, Lavana, Katu, Tikta, and Kashaya), Panchabhautik constitution of Rasas, Nirvrittivisheshakrama (manifestation in general and particular), Ritu and shad rasa Rasanurasayoh bheda (Difference between rasa and anurasa), Lakshana (characteristics),Guna and Karma of shad Rasas, Kopana and Shamana of Dosha and dushya by Shad rasas. Effects of excess usage of Rasa. Rasopalabdhhi, Rasaskandha.

**5- Vipaka:**

Etymological derivation and definition, difference between Avasthapaka and Vipaka, Types of Vipaka, (Dvididha-Trividha,Panchavidha) Guna and karma of Vipaka.

Grades of Vipaka (taratamy), Vipakopalabdhhi hetu (Factors to determineVipaka).

**6- Veerya:**

Etymological derivation, definition and Swarupa of Virya, Number of Virya. (Dwividha & Ashtavidha), Panchabhauthikatva

Virya karmani (Effects of Virya), General principles in determination of virya along with exceptions.



## 7- Prabhava:

Definition, Effects of Prabhava.

8- Interrelation of Rasa-Guna-Virya-Vipaka-Prabhava with respect to their strength (balabal nirupana).  
Samanapratyayarabdha and Vichitrapratyayarabdha dravyas.

## 9- Karma:

Lakshana, swarupa and bheda of karma (Definition, nature and types of action).

Explanation of the following Karmas with examples:

1. Deepana	2. Pachana	3. Samshodhana
4. Samshamana	5. Anulomana	6. Sransana
7. Bhedana	8. Rechana	9. Chhedana
10. Lekhana	11. Grahi	12. Sthambhana
13. Madakari	14. Pramathi	15. Abhishyandi
16. Vyavayi	17. Vikashi	18. Rasayana
19. Vajeeekarana	20. Jeevaneeya	21. Balya
22. Brimhana	23. Langhana	24. Medhya

10. Brief information on Karmas of dashemani gana of Charak Samhita.

## 11- Mishraka Gana:

11a)- Audbhida Gana (Vegetable origin) Brihatpanchamoola, Laghupanchamoola, Vallipanchamoola, Kantakapanchamoola, Trinapanchamoola, Madhyamapanchamoola, Jeevaneeya panchamoola, Panchapallava, Panchavalakala, Triphala, Trikatu, Trimada, Chaturusana, Panchakola, Shadusana, Chaturbeeja, Jeevaniya gana, Ashtavarga, Trijataka, Chaturajataka, Katuchaturjataka Panchatikta, Amlapanchaka, Chaturbhadr, Trikarshika, Swalpatriphala, Madhuratriphala, Mahavisha, Upavisha, Agrya aushadh varga- Knowledge of Agrayaushadha Varga with example.

11 b)- Jangama Gana (Animal origin)- Ksheerashtaka, Mutrashtaka, Pitta panchaka.

11 c)- Parthiva Gana (Mineral origin) - Lavana Panchaka, Kshara dvaya, Kshara Ashtaka.

## 12- Basis of nomenclature:

Basis of nomenclature of dravya, Basis and Derivation of synonyms.

13. Bheashaja Pariksha vidhi (as described in Charaka samhita vimana sthana 8), Dravya Sangrahana (collection of dravya)- Ecology- Classification of desha (geographical area) and bhumi (soil), swarupa of sangrahaniya dravya of (Nature and quality of drug to be collected). Sangrahana vidhi (Method of collection) -Vegetable and Animal origin drugs according to part used. Period of collection according to virya, samrakshana vidhi (preservation of collected dravyas), bheshajagara (Storehouse), study on different prayojyanga (useful plant parts).

**Part B****50 Marks****(I)****20 Marks**

14 a) Concept of dravya shodhan (purification of dravya). 14 b) Brief knowledge of Apamishran (adulterants)

14 c) Concept of Abhava pratinidhi dravya (substitutes)

15- Prashasta bhesaja (ideal drug), plant extracts. Concept of viruddha Dravya (incompatibility of the dravya).

16- Introduction to Nighantu Vigyan - Dhanwantari Nighantu, Bhavaprakashanighantu, Rajanighantu.

17- Brief knowledge of cultivation, conservation of medicinal plants and information about endangered species.

**(II)****30 Marks**

18. - Introduction, Definition & scope of Pharmacology and Principles of general Pharmacology. Brief Knowledge about pharmacology of the following - Anaesthetics, CNS depressants, Sedatives, Hypnotics, Tranquilisers, Antipyretics, Analgesics, Antiepileptics, Antihypertensive, Antianginal, Antiplatelet, Hypolipidaemic, Haemopoetic, Coagulants, Bronchodilators, Aerosols/ Inhalants, Expectorants, Digestants, Carminatives, Antacids, Antiulcer, Laxatives, Antidiarrhoeals, Antiemetic, Hepatoprotective, Diuretic, Antidiuretic, Lithotriptic, Antiinflammatory, Hormonal therapy, Antiobesity, Antidiabetic, Antithyroid, Oxytocic. Galactagogues, Contraceptives, Styptics, Antihistamines, Antimicrobial, Antibiotics, Antimalarial, Amoebicidal, Antifilarial, Anthelmintic, Antifungal, Vitamins, Minerals, Water imbalance and IV fluids, Vaccines, antivenom, antirabbies serum, Local anti septics, drugs in ophthalmic practice, Anti cancer drugs and immunomodulators.

**Paper II****100 Marks****Part A****70 marks****1-Detailed Knowledge of Following Dravya –**

- 1- Detailed knowledge of following drugs with respect to Basonym of drug, Main Synonyms, Regional Name, Botanical Name, Family, Classification of Dravya (Gana) as described in Charak and Sushrut, External morphology, Useful parts, Important phytoconstituents, Rasa panchaka, Action on Dosha, Dhatu, Mala, Prayogarha vyadhi (therapeutic indications), Amayikaprayoga and Matra (Therapeutic administration and Dose), Vishishta yoga (names of important formulations), Vishakta Lakshan (adverse effects), Chikitsopachara (remedial measures) and Shodhana (as required)  
[Alphabetical order and Botanical names to all the drugs are to be added]

Agaru  
Agnimantha  
Agnimantha  
Ahiphena  
Amalaki  
Apamarga  
Aragvadha

Guggulu  
Haridradvaya  
Haritaki  
Hingu  
Jambu  
Jatamansi  
Jatiphal

Pashanabheda  
Patala  
Pippali-Pippalimula  
Prishniparni  
Punarnava  
Pushkarmoola  
Rasna

Aragvadha	Jeerakadvaya	Rasona
Ardraka-Sunti	Jyotishmati	Rohitaka
Arjuna	Kalamegha	Saireyaka
Arjuna	Kampillaka	Sarivadvaya
Arkadvaya	Kanchanara	Sarpagandha
Ashvagandha	Kantakari	Shalaparni
Asoka	Kapikacchu	Shallaki
Ativisha	Karkatakshringi	Shalmali
Bakuchi	Karpura	Shankhapushpi
Baladvayam.	Katuki	Shatavari
Bhallataka	Khadira	Shigru
Bharangi	Kiratatika	Shirisha
Bhrungaraj	Kumari	Shyonaka
Bibhitaka	Kumkum Kesara	Talisa Patra
Bijak/ Vijaysar	Kupilu	Tila
Bilva	Kushta	Trivrut
Brahmi	Kutaja	Tulasi
Bruhati	Lavanga	Tvak
Chandanadvaya,	Lodhra	Ushira
Chitraka	Madanaphala	Vacha
Dadima	Mandukaparni.	Varahi
Devadaru	Manjishtha	Varahi
Dhataki	Maricha	Varuna
Durva	Musta	Vasa
Eladvayam	Nagakeshara	Vatsanabha
Eranda	Nimba	Vidanga
Gambhari	Nirgundi	Vidari
Gokshura	Palasha	Yastimadhu
Guduchi	Parpata	Yavani

**Part B-**

**30 marks**

II- Brief Knowledge of following dravyas with Respect to Sanskrit Name, Botanical Name, Family, Habit (Samanya Swarupa), Parts Used and Indications.

Agastya	Jati	Palandu
Ajamoda	Jayapala	Parasika Yavani
Akarkarabh	Jeevanti	Parijata
Amlavetasa	Kadali,	Parisha
Amra	Kadamba	Parnabija

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Amragandhiharidra	Kaidarya	Parnayavani
Ankola	Kakamachi	Parpataka
Aparajita	Kamala	Parushaka
Ashvagol	Kankola	Patalagarudi

Ashvattha	Karanja	Patha
Asthishrunkhala	Karavellaka	Patola
Atasi	Karavira	Patranga
Avartaki	Karira	Pilu
Avartani	Karpasa	Plaksha
Babbula	Kasamarda	Prasarani
Badara	Kasha	Priyala
Bakula	Kasni	Priyangu
Bhumyamalki	Kataka	Puga
Bijapoor	Katphala	Putiha
Bola	Kebuka	Putranjivaka
Chakramarda	Kharjura	Rajika/Sarshapa
Champaka	Kitmari	Rohitaka
Chandrashura	Kokilaksha	Saptachakra
Changeri	Koshataki	Saptaparna
Chavya	Kulatha	Saral
Chirbilva	Kumuda	Sarja
Chopachini	Kusha	Shala
Danti	Kusmanda	Shara
Darbha	Lajjalu	Sharapunkha
Dattura	Langali	Shatahwa
Dhanvayasa	Latakaranja	Shati
Dhanyaka	Latakasturi	Snuhi
Draksha	Madayantika	Sringataka
Dronapushpi	Mahanimba	Svarnakshiri
Gandhaprasarini	Mandukaparni	Tagara .
Garjara	Markandika	Tailaparni
Gojihva,	Masha	Talmuli
Gorakshaganja	Mashaparni	Taruni
Gunja	Matulunga	Tavakshira
Hinsapa	Mayaphala	Teja Patra
Hinstra	Meshashrungi	Tuvaraka
Hribera	Methika	Udumbara
Hrutpatri	Mudgaparni	Urana
Ikshu	Mulaka	Vamsha
Indravaruni	Murva	Vata
Ingudi	Nagabala	Vatada
Irimeda	Nala	Vrudhadaru
Ishvaku	Narikela	Vrukshamla
Isvari	Nili	
Japa	Padmaka	

III .-Introduction, Guna, Karma and Uses of following Jantava Dravya (Drugs of Animal Origin).

1. Kasturi

2. Gorochana

3. Mrigasringa

**IV- Introductory Knowledge of Following Annapana Varga:**

1.Jala Varga

2.Dugdha Varga

3. Madhu Varga

4.Taila Varga

5.Sukadhanya Varga

6.Shamidhanya Varga

7.Phala Varga

8.Shaka Varga

9. Mamsa Varga

10. Aharayogi

**Term Wise Distribution of Theory Syllabus of Dravyaguna**

**Paper 1**

1 <sup>st</sup> Term	2 <sup>nd</sup> Term
Syllabus Point No.	Syllabus Point No.
Part A- 1, 2, 3, 4, 5,6,7,8	Part A- 9, 10, 11, 12, 13
Part B- 14, 15 & Point 18(50%i.e. up to Anti inflammatory)	Part B- 16, 17 and Point 18(50% from Hormonal Therapy to immune-modulators)

**Paper 2**

1 <sup>st</sup> Term	2 <sup>nd</sup> Term
Syllabus Point No.	Syllabus Point No.
Part A- 1 to 54 (Detailed Knowledge of Dravyas)	Part A- 55 to 108 Dravyas(Detailed Knowledge of Dravyas)
Part B-1to74 (Brief Knowledge of Dravyas)	Part B-75 to 148 (Brief Knowledge of Dravyas) Part B- point no. III & IV.

**PRACTICALS**

1.A. Study of Macroscopic, Microscopic characters and Demonstration of organoleptic characteristics and grahya-agrahyatva of following plants and their useful parts.

i.Kanda (stem) - Guduchi or Ashtishrinkhala

ii.Patra (leaves) - Vasa or Kumari

iii.Pushpa (flower and Parts of flower)- Dhataki or Japa

iv.Phala (fruit) – Maricha or Madanaphala or Vidanga

v.Beeja (seeds) – Eranda or Kapikacchhu

- vi. Twak (bark) – Kutaja or Arjuna or Ashwattha
- vii. Moola (Root)- Punarnava or Chitraka
- viii. Nirryasa (exudate) – Guggulu or Mocharasa
- ix. Jangama dravya - Madhu or Ghrita.
- x. Bhaumik Kanda (Rhizome Dravya) – Adarak or Haridra

2. Records of Herbarium sheets of 50 medicinal plants Compulsory study tour other state/s for field knowledge and procurement of plant species.

### **Term Wise Distribution of Practical Syllabus of Dravyaguna**

<b>Practical Point No.</b>	<b>Name of Practical</b>
<b>1</b>	
1 <sup>st</sup> Term	Kand, Patra, Pushpa, Beeja, Twak and Phala
2 <sup>nd</sup> Term	Moola, Nirryas, Jangamdravya and Bhaumik Kanda

<b>Practical Point No. 2</b>	<b>Name of Practical</b>
1 <sup>st</sup> Term	Identification of Dravyas – Local flora , Herbarium Collection
	Study Tour in State
2 <sup>nd</sup> Term	Identification of Dravyas – out of state flora, Herbarium Collection
	Study Tour out of State
	Completion of Journals and Herbarium Record

## Exam Pattern

### Internal Assessment and University Theory Paper Pattern

Question Number	Specification Of Question	Total Number of Questions	Number of Questions to be compulsory	Marks For each question	Total marks
01	Short Answer Question	06	05	3	15
02	Short Answer Question	07	06	5	30
03	Long Answer Question	4	3	15	45
					90 marks

### Practical Exam Pattern For University Exam (180 Marks)

Spotting-Raw/ Crude Drugs	Spotting-Fresh Drugs	Practical	Viva	Practical Record	Herbarium	Total marks
30 marks	30 Marks	20 Marks	60 Marks	20 Marks	20	180 Marks
15 spot for 2 marks Each	15 spot for 2 marks Each	One Practical	Includes Internal and External Marks Combined As Both examiner has to take exam together	20 marks for Practical Journal	Fifty Herbarium Shits	--

### Practical Exam Pattern for Internal Assessment (90 marks)

<b>Spotting- Raw/ Crude Drugs</b>	<b>Spotting- Fresh Drugs</b>	<b>Practical</b>	<b>Viva</b>	<b>Total marks</b>
20marks	20 Marks	10 Marks	40 Marks	90 Marks
10 spot for 2 marks Each	10 spot for 2marks Each	One Practical	Includes Internal and External Marks Combined As Both examiner has to take exam together	--



**(प्रात्यक्षिक - द्रव्यपरिचय)**  
**अनुक्रमणिका**

अ.क्र.	प्रयोगाचे नाव	दिनांक	अध्यापक स्वाक्षरी
०१.	काण्डे गुडूची किंवा अस्थीशृंखला		
०२.	पत्रे घृतकुमारी किंवा वासा		
०३.	पुष्पे धातकी किंवा जपा		
०४.	फले मरीच किंवा मदनफलम् किंवा विडंग		
०५.	बीजे विडंगम किंवा कपिकच्छु		
०६.	त्वचि अर्जुन किंवा कुटज किंवा अश्वत्थ		
०७.	मूलाः पुनर्नवा किंवा चित्रक		
०८.	निर्यासे गुग्गुलः किंवा मोचरस		
०९.	जांगमद्रव्य मधु किंवा घृत		
१०.	भौमिक काण्ड आर्द्रक किंवा हरिद्रा		

# Practical Record Book

महाराष्ट्र आरोग्य विज्ञान विद्यापीठ, नाशिक

..... महाविद्यालय .....

द्रव्यगुण विज्ञान – वनस्पती परिचय

दिनांक:

द्रव्यगुणविषये प्रायोगिकपत्रकम्

द्रव्यनाम:-

Family:

गण:

पर्यायी नाम:-

संस्कृत –

मराठी –

हिंदी –

English –

परीक्ष्य द्रव्यस्य विशेषविभागः। (Part used)

(मूल-पत्र-त्वक्-निर्यास काण्ड आदि)

अ) द्रव्यं यथादृष्टं साविस्तरं वर्णनीयम् – (Macroscopy)

आकृती विवरण

बाह्यस्वरूप (Macroscopy of part used)

अखंड द्रव्यस्य चित्रम्

आभ्यंतर स्वरूप

व्यतस्थ छेद ( आडवा छेद) (Microscopy of part used T.S.)

सूक्ष्मदर्शकसहाय्येन यथा दृष्टं तदनुसार वर्णनम् ।

आकृती (Diagram of T.S.)

ब) द्रव्यस्य अनुलम्ब व्यतस्य छेदयो : (Microscopy of Part used L.S.)

सूक्ष्मदर्शकसहाय्येन यथा दृष्टं तदनुसार वर्णनम् ।

आकृती – (Diagram of T.S./ L.S.)

7) रासायनिक संघटन – (Chemical constitution)

८) पांचभौतिक परीक्षा – (Organoleptic characters)



२. स्पर्श परीक्षण

	गुरु	लघु	मृदु	कठीण	स्निग्ध	रुक्ष	रोम	कंटक	रेखा
शुष्क									
आर्द्र									

३) रूप परीक्षण

अ) बाह्य – रचना वर्णन

१. वर्ण
२. आकार
३. प्रकार
४. अवस्था
५. विशेषता

ब) आभ्यन्तर रचना वर्णन

१. प्रयोज्य अंग
२. चूर्ण (संघटन)

४) रसपरीक्षण

द्रव्य		मधुर	अम्ल	लवण	कटू	तिक्त	कषाय
शुष्क	प्रधानरस						
	अनुरस						
आर्द्र	प्रधानरस						
	अनुरस						

५) गंधपरीक्षण

	सुगंध	दूर्गंध	उग्र	मंद्	साधारण	विशेष	धूपन पश्चात्
शुष्क							
आर्द्र							

६) अपमिश्रण:-

७) ग्राह्याग्राह्यत्व:-

८) प्रयोग द्रव्यस्य स्वरूप परीक्षणः

क्रिया	वर्ण	विलयता	विशेषता
		घुलन/अघुलनशीलता अल्पांश / सर्वांश	
१. जले			
२. तैले			
३. घृते			
४. सुरायां			



८) भौतिक गुण परीक्षण :

द्रव्य	गुरु	लघु	मृदु	कठीण	श्लक्ष्ण	पिच्छिल	विशद	रुक्ष	तीक्ष्ण	द्रव	सान्द्र
मूल											
काण्ड											
त्वक्											
पत्र											
पुष्प											
फल											
बीज											
निर्यास											
जांगम											

द्रव्यस्य भौतिकता निर्णय  
(रसानुसारेण)

अध्यापक स्वाक्षरी

## Herbarium Sheet Format

द्रव्य नाम:-

वनस्पती परीचय:- क्षुप/गुल्म/वृक्ष/लता

प्रयोज्य अंग :-

पर्याय:- १. संस्कृत _____ २. हिंदी _____ ३. मराठी _____ ४. S.N.(शास्त्रीय नाव) _____ ५. English _____ Family _____ कुल _____ द्रव्यसंग्रह काळ _____ द्रव्यसंग्रह स्थळ _____	कर्म :- दोष: _____ धातू _____ _____ मल _____ _____ रासायनिक संघटन _____ _____ प्रधान कल्प _____ _____ मात्रा _____ _____	रस: _____ वीर्य : _____ विपाक _____ प्रभाव _____ गुण _____ प्रमुख कर्म _____ _____ रोगघ्नता _____ _____
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विद्यार्थ्यांचे नांव :-

द्रव्य क्रमांक :-

अध्यापक हस्ताक्षर

## Reference Books

1. Abhinav Buti Darpan (Vol.1-2) -Vd. Roop Lal Vaishya
2. Aushadna Vigyna Shastra -Acharya Pt. Vishvanatha Dwidevi
3. Ayurvediya Aushadnkarma vigyana -Acharya V.J. Thakur
  
4. Bedi Vanaspati Kosha -Prof. Ramesh Bedi
5. Bhaishajyaguna Vigyana -Dr. Alakhnarayan Singh
6. Bhav Prakash Nigantu (English) -Shreekanthamurti
7. Bhav Prakash Nighantu -With Vd. Krishna Chandra Chunekar commentary
  
8. Bhrinad dravyagunadarsha -Mahendra Kumar Shastri
9. Classical Uses of Medicinal Plants -Acharya Priyavrata Sharma
  
10. Controversial Medicinal Plants -Vd. G. Bapa Lal
11. Dalhana Ka Dravyaguna Shastra Ke Kshetra Me Yogadana -Vd. Shiv Kumar Vyas
  
12. Dravyaguna Kosha -Acharya Priyavrata Sharma
13. Dravyaguna Sutram -Acharya Priyavrata Sharma
14. Dravyaguna Vigyana -Dr. Gyanendra Pandey
15. Dravyaguna Vigyana(Vol. 1-2) -Acharya Yadavji Tikram Ji
16. Dravyaguna Vijyana -Dr. V.M. Gogate
17. Dravyaguna Vigyana (Vol. 1-5) -Acharya Priyavrata Sharma
18. Dravyaguna Shastrum -Vaidya G.A. Phadake
19. Dravyaguna Vijyana -Dr. A.P. Deshpande
20. Dravyagunavijnana basic Principles -Prof.D.S.Lucas
  
21. Forgotten Healers (Indian Medicinal Plants) -Dr. Prakash Pranjape
  
22. Glossry of Vegetable Drugs in Bhritrays -Thakur Balwant Singh & Vd. Krishna Chandra Chunekar
23. Introduction to Dravyaguna -Acharya Priyavrata Sharma
24. Kriyatamka Aushadi Parichaya -Acharya Pt. Vishvanath Dwidevi
25. Materia Medica -Acharya Ghosh
26. Nighantu Adarsh (Vol. 1-2) -Vd. Bapa Lal
27. Pharmacological basis of Medical Practice -Goodman & Gillman
  
28. Pharmacology and Pharmacotherapeutics -Satoskar Bhandarkar & Ainapure
  
29. Prayogatamaka Dravyaguna Vigyana -Dr. Maya Ram Uniyal
30. Priya nighantu -Acharya Priyavrata Sharma
31. Raspanchaka/Dravyaguna Siddhanta -Prof. Shivcharan Dhyani
32. System of Plant Nomenclature in Ayurveda -Dr. Gyanendra Panday
  
33. Text Book of Pharmacognosy -Trees & Valis
34. Textbook of Dravyaguna -Dr.K.Nishteswar
35. Unani Dravyaguna Vigyana -Hakim Daljeet Singh

36. Useful parts of Charaka, Sushrut,  
and Vagbhata. -
37. Uttarakand Ki Vanaspatiya -Dr. Gyanendra Pandey
38. Vanoaushadi Darshika -Thakur Balwant Singh
39. Vanoaushadi Nidarshika -Dr. Ram Sushil Singh
40. Vedic Vanaspatiyān -Dr. Dinesh Chandra Sharma

**AGADTANTRA, VYAVAHAR-AYURVED EVUM VIDHIVAIIDYAK**  
(TOXICOLOGY, FORENSIC MEDICINE AND MEDICAL JURISPRUDENCE)

**Theory One Paper – 100 Marks**  
**Theory -200 hrs**

**Practical/Viva voce -50 Marks**  
**Practical - 100 hrs**

**Part- A**

**50 Marks**

**1** Derivation, definition of Visha and Agadatantra. Scope of Agadatantra. Visha Utpatti, Visha Prabhava, Visha Pranaharana Kriya, Visha Guna, Visha Gati, Visha Vega Visha Sankata, Shankha Visha.

**2** Definition of toxicology, Definition of poison, suicidal and homicidal poisons, classification of poisons, their action and route of administration, absorption, excretion, metabolism, diagnosis and general principles of treatment, duties of a medical practitioner in case of suspected poisoning.

**3** Origin and Classification of Visha:-Its sources, Difference between Visha, Madya and Oja guna, Visha Upadrava and Visha Mukta Lakshana.

**4** Tests for detection of Visha, and Modern Toxicological Techniques of detection of poisons Visha Data Lakshana, Visha Peeta Lakshana, Signs and symptoms of Visha afflicted organs and personal effects. (Poisoning with Anjana, Lepa paduka, Abharana etc.

**5** Introduction to Environmental Toxicology- Samuhika Vishaprayoga- effect of chemical and nuclear warfare.

**6** Vishopakrama described by Charak, General principles of Management of poisoning.

**7** Manifestation of poisoning due to poisons of plant origin their fatal Dose, fatal period, management of poisoning, post mortem appearance and its medico legal importance. Visha and Upavisha- Arka, Snuhi, Langali, Karaveera, Gunja, Ahiphena, Dhatura, Bhallataka, Vatsanabha, Kupeelu, Jayapala, Bhanga & Tobacco, Parthenium hysteriphorus, Chitraka, Eranda, Digitalis and Cerebra Odallam.

**8** Garavisha, Dooshivisha, Viruddhahara. Food adulteration and poisoning—classification, diagnosis, management and contemporary significance.

**9** Jangama Visha – Detailed study of Sarpa, Keeta, Loota, Vrischika, Mooshika, Alarka – Visha; Lakshana, Bheda, Chikitsa and their Sadhyasadyata (contemporary and classical views).

**10** Introduction to poisoning due to Acids, Alkalis, metals, Non-metals, Asphyxiants and others, their Fatal Dose, Fatal period, Manifestation, management, medico legal importance and postmortem appearance of poisoning due to:

a) Acid and Alkalis– Sulphuric acid, Hydrochloric acid, Nitric acid, Hydrocyanic acid, Oxalic acid, Carbolic acid, Formic acid, alkalis in general.

b) Asphyxiants – Carbon monoxide, Carbon dioxide, Hydrogen sulphide

c) Nonmetallic poisons – Phosphorous, Iodine

Metallic poisoning – Arsenic, Mercury, Lead, Copper, Zinc, Tin.

d) Others - Petroleum – Kerosene Organo phosphorus compounds -Aluminum phosphate, Organo Chlorinated Compounds, Household poisons.

**11** Madya and Madatyaya. Alcohol poisoning (Ethanol and Methanol).

**12** *Introduction to Narcotic drugs and Psychotropic substances Act 1985.*

## **Part –B**

**50 Marks**

**1.** Definition of Vyavahara Ayurveda (Forensic medicine) and Vidhivaidyaka (Medical jurisprudence), concise history of Vyavahara Ayurveda (Forensic medicine) and Vidhivaidyaka (Medical jurisprudence). Introduction to Indian Penal Code, Indian Evidence Act and Criminal Procedure Code.

**2.** Legal Procedures:- Inquest, Evidence, Witness, Courts and their powers.

**3.** Personal identity and its Medico legal aspects, forensic odontology, Introduction to Forensic Serology and DNA profiling.

**4.** Death and its Medico Legal Aspects, Medico Legal autopsy and *exhumation*.

**5.** Injuries and thermal injuries, their medico Legal aspects, general introduction of weapons.

**6.** Dowry deaths (Domestic Violence), their Medico Legal importance and laws in relation to it.

**7.** Asphyxial deaths and its Medico Legal importance.

**8.** Medico Legal importance of Pregnancy, Delivery; Impotence & Sterility, Abortion, Infanticide, battered baby. Virginity, Artificial Insemination, Legitimacy.

**9.** Sexual offences, and their Medico Legal aspects. Sexual perversions.

10. Introduction to Forensic psychiatry.

11. Introduction to forensic laboratory.

12. Ethics as in classical Texts. Types of Vaidya, Pranabhisara and Rogabhisara Vaidya, Qualities of Vaidya, Responsibilities of Vaidya, Chaturvidha Vaidyavrutti, Duties of Vaidya to his patient, Vaidya Sadvritam, Apujya Vaidya, Code of conduct.

13. Laws in relation to Medical practitioners: Indian Medicine Central Council Act.

14. Maintenance of medical record.

15. Physician's responsibility in criminal matters, Professional negligence, Civil negligence, Criminal negligence, Medico Legal aspects of Acquired Immune Deficiency Syndrome, Rights of an unborn child, Medical Termination of Pregnancy Act Transplantation of human organs Bill 1994, Pre Natal Diagnostic Testing Act, Malingering of feigned diseases, International Code of Medical Ethics for Doctors. Clinical establishment Act. Consumer Protection Act 1986.

### Term wise Distribution of Syllabus

Part	First Term	Second Term
PART A	1-8	9-12
PART B	1-9	10-15

### PRACTICAL

#### Practical Training

1. Post Mortem examination

2. Evidence in the court

3. Demonstrations in the Forensic & Toxicology museum (Toxic & Anti toxic substances, medico legal specimens & Charts)

4. Clinical postings

5. Library Hours for compilation

## Exam Pattern

### Internal Assessment and University Theory Paper Pattern

Question Number	Specification Of Question	Total Number of Questions	Number of Questions to be compulsory	Marks For each question	Total marks
01	Short Answer Question	06	05	3	15
02	Short Answer Question	07	06	5	30
03	Long Answer Question	4	3	15	45
					90 marks

### **University Practical oral exam mark-list.**

Seat No.	Practical Journal	Post Mortem & Others Journal	Spotting	Oral / Viva Voce	Total Marks	
					45	In Word Fourty Five
Marks ⇒	8	7	10	20		

*Note -5 marks for internal assessment average.*

### **Internal assessment Practical oral exam mark-list.**

Seat No.	Spotting	Oral / Viva Voce	Total Marks	
			90	In Word Ninety
Marks ⇒	20	70		



# अगदतंत्र व्यवहार आयुर्वेद एवम् विधिवैद्यक प्रात्यक्षिक पुस्तिका नमुना

## अनुक्रमणिका (३० प्रात्यक्षिके)

१. वत्सनाभ
२. अर्क
३. करवीर
४. गुंजा
५. अहिफेन
६. धतुर
७. कुचला
८. भल्लातक
९. एरंड
१०. भंगा
११. ताम्रपर्ण (तंबाखू)
१२. पारद
१३. अर्सेनिक
१४. शिसे (Lead)
१५. मोरचूद
१६. रंकिल
१७. गंधकाम्ल
१८. कॉस्टिक सोडा
१९. कार्बोलिक अॅसिड (फिनॉल)
२०. मिथिल अल्कोहोल
२१. ऑर्गनोफॉस्फरस कंपाउंड्स.
२२. बार्बिच्युरेट्स
२३. सविष-निर्विष सर्प - भेद.
२४. आमाशय धावन
२५. प्रतिविष वर्णन - पोटॅशियम परमॅंग्रेट (POTASSIUM PERMANGNATE)
२६. प्रतिविष वर्णन - अॅट्रोपिन (ATROPINE)
२७. प्रतिविष वर्णन - नॅलोक्झोन (NALOXONE)
२८. प्रतिविष वर्णन - सर्प लस (Polyvalent Anti Snake Venom Serum)
२९. न्यायवैद्यकीय तक्त्यांचे वर्णन (कोणतेही दोन)
३०. न्यायवैद्यकीय मॉडेल्सचे वर्णन (कोणतीही दोन)

# अगदतंत्र व्यवहार आयुर्वेद एवम् विधिवैद्यक प्रात्यक्षिक पुस्तिका नमुना

विषद्रव्यांचे वर्णन खालील मुद्यांच्या आधारे करावे.

१. विषनाम
२. पर्याय
३. विष वर्गीकरण- आयुर्वेदीय व आधुनिक मतांनुसार
४. स्वरूप
५. विषाक्त तत्त्व
६. कार्मुकता (**Mechanism of Action**)
७. मारक मात्रा
८. मारक काल
९. विष लक्षणे (स्थानिक व सार्वदेहिक)
१०. व्यवच्छेदक निदान (**Differential Diagnosis**)
११. चिकित्सा - आयुर्वेदीय व आधुनिक मतांनुसार
१२. शवपरीक्षण (मृत्युत्तर रूप)
१३. न्यायवैद्यकीय महत्त्व
१४. आकृती (नाम सहित)-आवश्यकतेनुसार

## Post Mortem Journal

10 Cases of Post Mortem Examination should be written in Journal in following format.

Maharashtra University of Health Science, Nashik

Name of the college - \_\_\_\_\_

### Department of Agadtantra

Memorandum of a post-mortem examination held at Yashwantrao Chavan Memorial Hospital on the dead body \_\_\_\_\_ of village / city Pimpri, Taluka Haveli, District Pune.  
By Dr. \_\_\_\_\_

#### I) GENERAL PARTICULARS

- 1) a) By whom was the corpse sent ?  
b) Name of place from which sent ?  
c) Distance of place from where sent ?
- 2) By whom was the corpse brought ?
- 3) By whom identified ?
- 4) The date, hour & minute of its receipt
  - a) The date, hour & minute of beginning post-mortem examination
  - b) The date, hour & minute of ending post-mortem examination
- 5) Substance of accompanying report from Police officer or Magistrate, together with the date of death, if known, supposed cause of death or reason for examination
- 6) If not examined at Dispensary or Hospital
  - a) Name of place where examined
  - b) Distance from Dispensary or Hospital
  - c) Reason why the body was not sent to the Dispensary or Hospital

## II) EXTERNAL EXAMINATION

- 7) Sex, apparent age, race or caste  
Description of clothes & of ornaments on the body
- 8) Condition of clothes-whether wet with water, stained with blood or soiled with vomit or faecal matter
- 9) Special marks on the skin such as scars, tattooing etc. Any malformations, peculiarities or other marks of identification. State of the teeth.  
In newly born infants, the length (if possible), the weight of the body to be recorded together with the state of the hair, nails & umbilical cord, its length, whether placenta is attached or not, if present, its size & condition
- 10) Condition of the body -  
Whether well nourished, thin or emaciated, warm or cold
- 11) Rigor Mortis -  
Well marked, slight or absent; Whether present in the whole body or part only
- 12) Extent & signs of decomposition, presence of post - mortem lividity at buttocks, loins, back & thighs or any other part. Whether bullae present & the nature of their contained fluid. Condition of the cuticle.

13) Features -

- Whether natural or swollen, state of eyes,
- position of tongue, nature of fluid (if any)
- oozing from mouth, nostrils or ears

14) Condition of skin -

- Marks of blood etc. (In suspected drowning
- the presence or absence of cutis anserina to be noted)

15) Injuries to external genitals

- Indication of purging

16) Position of limbs -

- Especially of arms & of fingers. In suspected drowning, the presence or absence of sand or earth within the nails or on the skin of hand & feet

17) Surface wounds & injuries -

- Their nature, position, dimension (measured) & directions to be accurately stated-their probable age & causes to be noted. If bruises be present, what is the condition of the subcutaneous tissues. (N. B. when injuries are numerous & cannot be mentioned within the space available, they should be mentioned on a separate paper which should be signed)

18) Other injuries discovered by external

- examination or palpation as fractures etc.
- a) Can you say definitely that the injuries shown against Sr. No. 17 & 18 are antemortem injuries ?

### III) INTERNAL EXAMINATION

#### 19) Head

a) Injuries under the scalp, their nature

b) Skull - Vault & base - describe

fractures, their sizes, dimensions,  
directions etc.

c) Brain - The appearance of its  
covering, size, weight & general  
condition of the organ itself & any  
abnormality found in its examination to  
be carefully noted with weight

#### 20) Thorax

a) Walls, ribs, cartilages

b) Pleura

c) Larynx, Trachea & Bronchi

d) Right lung

e) Left lung

f) Pericardium

g) Heart with weight

h) Large vessels

i) Additional remarks

#### 21) Abdomen

a) Walls

b) Peritoneum

c) Cavity

d) Buccal cavity, teeth, tongue &

Pharynx

- e) Oesophagus :
- f) Stomach & its contents :
- g) Small intestine & its contents :
- h) Large intestine & its contents :
- i) Liver (with weight) & gall bladder :
- j) Pancreas & suprarenals :
- k) Spleen with weight :
- l) Kidneys with weight :
- m) Bladder :
- n) Organs of generation :

22) Additional remarks with where possible,  
 Medical officer's deduction from the  
 state of the contents of the stomach as to  
 time of death & last meal

23) State which viscera (if any) have been :  
 retained for chemical examination &  
 also quote the numbers on the bottles  
 containing the same.

24) Opinion as to the cause / probable :  
 cause of death

Date : \_\_\_\_\_

Name of student : \_\_\_\_\_

**Teacher's Signature**

## Reference Books

1. Topics related to Agada Tantra from Charak Samhita, Sushrut Samhita, Ashtanga Hridaya, Ashtanga Samgraha, Kasyapa Samhitha, Yogaratnakara, Bhavaprakasha and Madhava Nidana.
2. Vidhivaidyaka (Vyavahar Ayurveda Vijnan) Dr. Charuchandra Pathak Modi
3. Medical Jurisprudence and Toxicology Edited by Vd. Govardhan
4. Basavarajeeyam Sh. Ramanath Dwivedi
5. Agada Tantra Edited by Dr. Huparikar, Dr. Joglekar
6. Text book of Agada Tantra Edited By Dr. Huparikar, Dr. Joglekar
7. Agadatantra ki Pathyapustaka Dr. Shekher Namboodri Vaidya Balakrishnan Nair, Kerala
8. Agad Tantra
9. Vishachikitsa (Ayurveda Toxicology English Translation) Dr. H.S. Mehta VPSV Ayurveda college Kottakkal
10. Medical Ethics and Medical Laws in India Prof. Kangle
11. Toxicology Ayurvedic Perspective Dr. Raghunath Singh
12. Kautilya Arthashastra (English) Dr. Ayodhya Prasad Achal
13. Kautilya Arthashastra (Hindi) Dr. Indramohan Jha (Sachchan)
14. Vyavahar Ayurveda Dr. V.V. Pillay
15. Vyavahar Ayurveda Vigyanam Dr. B. Umadathan
16. Textbook of Forensic Medicine and Toxicology Govt. of India
17. Forensic Medicine
18. Relevant Acts
19. Relevant topics from Manu Smriti



## CHARAKASAMHITA -PURVARDHA

(Sutrasthana, Nidanasthana, Vimanasthana, Sharirasthana and Indriyasthana)

Theory- One Paper– 100 Marks

Lectures – 200 Hours

### Part A

- |                 |           |
|-----------------|-----------|
| 1.Sutrasthana   | -40 Marks |
| 2.Indriyasthana | -10 Marks |

### Part B

- |                 |           |
|-----------------|-----------|
| 1.Nidanasthana  | -15 Marks |
| 2.Vimanasthana  | -20 Marks |
| 3.Sharirasthana | -15 Marks |

### Termwise distribution of syllabus

1 <sup>st</sup> Term	2 <sup>nd</sup> Term
Sutrasthana – 1 <sup>st</sup> to 15 <sup>th</sup>	Sutrasthana – 16 <sup>th</sup> to 30 <sup>th</sup>
Nidansthana – 1 <sup>st</sup> to 5 <sup>th</sup>	Nidansthana – 6 <sup>th</sup> to 8
Sharirsthana –1 <sup>st</sup> to 5 <sup>th</sup>	Sharirsthana – 6 <sup>th</sup> to 8
Vimansthana –1 <sup>st</sup> to 5 <sup>th</sup>	Vimansthana – 6 <sup>th</sup> to 8
Indriyasthana –1 <sup>st</sup> to 8 <sup>th</sup>	Indriyasthana – 9 <sup>th</sup> to 12

### Exam Pattern

### Internal Assessment and University Theory Paper Pattern

Question Number	Specification Question	Of	Total Number of Questions	Number of Questions to be compulsory	Marks For each question	Total marks
01	Short Answer Question		06	05	03	15
02	Short Answer Question		07	06	05	30
03	Long Answer Question		04	03	15	45
						90 marks

## Reference Books

- 1.Charakasamhita –Ayurveda Dipika commentary by Chakrapani.
- 2.Charakasamhita (Hindi Commentary): Vaidya Jayadev Vidyalkar or Vd. Atridev Vidyalkar or Prof. Gorakha Nath Chaturvedi & Kashinath Shastri or Dr. Brahmanand Tripathy or Dr. Ravi Dutta Tripathy
- 3.Charakasamhita (English Commentary): Dr. Ram Karan Sharma & Vd. Bhagwan Dash or Acharya Priyavrata Sharma.
- 4.Charakasamhita-Ayurveda Dipika Commentary-Hindi Translation by Dr. B L Gaur, published by Rashtriya Ayurved Vidyapeeth.