

**DETAILED SYLLABUS FOR THE POST OF ASSISTANT
PROFESSOR IN DRAVYAGUNA IN AYURVEDA MEDICAL EDUCATION
(Cat.No. 118/2021)**

Modules

1. Basics - 15 marks

Definition of Dravyagunavigyan, dravya and oushadha; Panchabhotikatwa of dravya; Properties of draya classified based on bhoota predominance; Etymology, definition, types, features and effects of each rasa, each gurvadi guna, each veerya, each vipaka and prabhava; Utility of Paradi guna; Knowledge about karma as per Sarangdhara

2. Drug details - 30 marks

Knowledge about the scientific name, habitat, habit, part/product used, collection, rasapancaka, chemical constituents, effect on dosha, dhatu & mala, diseases indicated, dose and names of important formulations of the following -

Agaru, Agastya, Agnimantha, Ahiphena, Ajaksheera, Ajamoda, Amalaki, Amlavetasa, Amra, Ankola, Apamarga, Aparajita, Aragvadha, Ardraka-Sunti, Arjuna, Asana, Ashvagandha, Asoka, Ativisha, Badara, Bakuchi, Bala, Bhadra, Bharangi, Bhrungaraj, Bhumyamalki, Bibhitaki, Bilva, Brahmi, Bruhati, Chakramarda, Canaka, Candanadvaya, Candrashura, Cangeri, Cavyam, Cirivilva, Citraka, Dadima, Danti, Darbha, Dattura, Devadaru, Dadhi, Dhanvayasha, Dhanyaka, Dhataki, Draksha, Dronapushpi, Durva, Ela, Eranda, Gambhari, Godhuma, Go-Ghrita, Goksheera, Gokshura, Gorocana, Guda, Guduchi, Guggulu, Gunja, Haridradvaya, Haritaki, Hingu, Hribera, Ikshu, Indravaruni, Ingudi, Irimeda, Jambu, Jatamansi, Jatila, Jatiphala, Jayapala, Jeerakadvaya, Jeevanti, Jyotishmati, Kadali,, Kaidarya, Kakamachi, Kalaaya, Kalamegha, Kamala, Kampillaka, Kanchanara, Kankola, Kasturi, Kantakari, Kapikacchu, Karanja, Karavellaka, Karavira, Karkatacashringi, Karpasa, Karpura, Kasamarda, Kataka, Katphala, Katuki, Khadira, Kharjura, Kiratatikta, Kodrava, Kokilaksha, Kshoudra, Kulatha, Kumari, Kumkumam, Kumudam, Kupilu, Kusha, Kushta, Kusmandam, Kutajam, Lajjalu, Langali, Latakaranja, Lavangam, Lodhram, Madanaphalam, Mamsa-

Jangala and anoopa, Mandukaparni, Manjishta, Maricham, Masha, Mashaparni, Matulunga, Methika, Mudga, Mudgaparni, Murva, Musta, Nagakeshara, Narikela, Navaneetam, Nilini, Nimba, Nirgundi, Padmaka, Palandu, Palasha, Parpataka, Pashanabheda, Patala, Patha, Patola, Pippali-Pippalimula, Plaksha, Prasarani, Prishniparni, Priyangu, Puga, Punarnava, Pushkarmoola, Raktasali, Rasna, Rasona, Rohitaka, Sahachara, Saptachakra, Saptaparna, Saribadvaya, Sarpagandha, Sarshapam, Sarshapa tailam, Shalaparni, Shallaki, Shalmali, Shankhapushpi, Sharapunkha, Shatapushpa, Shatavari, Shati, Shigru, Shirisha, Shyonaka, Snuhi, Sringataka, Surana, Swarnakshiri, Tagara, Takram, Talisa Patra, Tavakshira, Tilam, Tila tailam, Trivrut, Tulasi, Tuvarakam, Tvak, Udumbara, Ushira, Vacha, Vamsha, Varuna, Vasa, Vata, Vatsanabha, Vidanga, Vidari, Vrukshamla and Yashtimadhu.

3. Formulations (Ganam & yogam) - 10 marks

Knowledge of groups of drugs mentioned in Ashtanga Hrdaya Sutra Chapter 15 Sodhanadi gana samgrahaneeya; 50 mahakashaya of Caraka Samhita:Sutra:6; Ashtavarga, Brihatpanchamoola, Caturbeeja, Caturbhadra, Caturajataka, Caturusana, Laghupanchamoola, Vallipanchamoola, Kantakapanchamoola, Trinapanchamoola, Madhyamapanchamoola, Panchapallava, Panchavalakala, Triphala, Trikatu, Trimada, Panchakola, Shadusana, , Jeevaniya gana, Trijataka, , Panchatikta, Amlapanchaka, , Trikarshika, Swalpatriphala, Madhuratriphala, Mahavisha, Upavisha, Lavana Panchaka, Kshara dvaya, Kshara Ashtaka and Mutrashtaka

4. Drug evaluation & standardisation - 10 marks

Knowledge about methods of evaluation of crude drugs as macroscopic, microscopic, physico -chemical & phytochemical evaluations; basic knowledge about the techniques, instruments and equipments used for standardisation and evaluation of crude drugs and finished products – Column Chromatography, TLC, HPLC, HPTLC and GC-MS

5. Toxicity, purification, substitution - 5 marks

Knowledge about various impurities in drugs and purification methods as per

classics, heavy metal contamination, aflatoxins, microbial contamination, food colours, additives; contamination detection methods, AAS, drug adulteration and permitted substitution.

6. Oushadha sevana and Agryaushadha - 5 marks

Thorough Knowledge about matra, anupana, bhesaja kala, prasastha bhesaja, viruddha; Agryaushadha mentioned in Ashtanga Hrdaya, Ashtanga Samgraha and Caraka Samhita

7. General pharmacology - 5 marks

Basic knowledge about the terminology in modern pharmacology as - Pharmacology, Pharmacokinetics, pharmacodynamics, pharmacotherapy, routes of drug administration, drug-receptor complex, agonist, antagonist, intrinsic activity, drug-response curve, biological half-life, ED₅₀, LD₅₀, therapeutic index, ADR, drug toxicity, additive effect, synergism, efficacy and potency; basic knowledge of Anaesthetics, Antibiotics, Antivirals, immunomodulators, Vitamins, Minerals, Vaccines, antivenom, antirabies serum, Local antiseptics, water imbalance and IV fluids.

8. Experimental pharmacology - 5 marks

Basic knowledge about in silico studies; in vitro anti-microbial study models, cell line models, CAM assay; knowledge about animal experimental models for analgesic, anti pyretic, anti inflammatory, anti diabetic, dyslipidaemic, anti-convulsant, anti ulcer, wound healing effects & CNS activity and reverse pharmacology.

9. Lexicons, other texts and challenges - 5 marks

Knowledge about the lexicons and other books on Dravyaguna in ancient and modern times - Dhanwantari Nighantu, Rajanighantu, Bhavaprakashanighantu, Madanpala nighantu, Saligramnighantu, Nighantu Adarsa, Abhidhana manjari, Indian Materia Medica and Indian Medicinal Plants (Kirtikar); Knowledge about controversial drugs, extrapharmacopoeial drugs, endangered plant species, red lists and conservation.

10. Contemporary aspects - 10 marks

Basic knowledge about - Pharmacovigilance, Good Clinical Practice, Good Collection Practice, Good Manufacturing Practice, Pharmacopoeia Commission for Indian Medicine & Homoeopathy (PCIM&H), PLIM (Pharmacopoeial Laboratory for Indian Medicine), Ayurvedic Pharmacopoeia of India, Ayurvedic Formulary of India, CSIR (Council of Scientific & Industrial Research), CPCSEA (Committee for the Purpose of Control and Supervision of Experiments on Animals) and CTRI (Clinical Trials Registry- India), TKDL; awareness of relevant portions of Drugs and cosmetic act (Parts XVI to XIX Rules 151 to 169), Magic remedies Act, Intellectual Property Right (IPR) and Regulations pertaining to Import and Export of Ayurvedic drugs.

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