DEPARTMENT OF VETERINARY PHARMACOLOGY & TOXICOLOGY
SHOURABH COLLEGE OF VETERINARY SCIENCE

Kheda, Hindaun City, Rajasthan

LECTURE SCHEDULE – THEORY

Third Professional B.V.Sc. & A.H.

VETERINARY PHARMACOLOGY & TOXICOLOGY

Credit Hrs. (4+1) w.e.f. 2/12/2024 Theory Lecture Duration: One hour

Name of Teachers: Dr. Pawan Kumar Sharma, Dr. Mamta Rani,
Dr. Yashpal Shaini, Dr. Abhay Kumar and
Dr. Prabhakar Maurya

Unit-1: GENERAL PHARMACOLOGY

S.NO.	Date	Topics
1	2.12.2024	Introduction of Pharmacology
2	3.12.2024	Historical development
3	4.12.2024	Branches and scope of Pharmacology
4	5.12.2024	Sources of drugs
5	9.12.2024	Nature of drugs
6	10.12.2024	Pharmacological terms, definitions and Nomenclature of drugs
7	11.12.2024	Principles of drug activity: Pharmacokinetics
8	12.12.2024	Routes of drug administration
9	16.12.2024	Absorption
10	17.12.2024	Distribution
11	18.12.2024	Biotransformation of drugs
12	19.12.2024	Excretion of drugs
13	23.12.2024	Pharmacodynamics - Concept of drug and receptor
14	26.12.2024	Dose-response relationship
15	30.12.2024	Terms related to drug activity
16	31.12.2024	Factors modifying the drug effect and dosage
17	1..1.2025	Adverse drug reactions of drugs
18	2.1.2025	Drug interactions

Unit-2: DRUGS ACTING ON AUTONOMIC NERVOUS SYSTEM

S.NO.	Date	Topics
19	7.1.2025	Neurohumoral transmission
20	8.1.2025	Pharmacology of neurotransmitters
21	9.1.2025	Adrenoceptors agonists
22	13.1.2025	Adrenoceptors antagonists
23	16.1.2025	Adrenergic neuron blockers

24	20.1.2025	Cholinoceptor agonists
25	21.1.2025	Cholinoceptor antagonists
26	22.1.2025	Autacoids: Histamine, histamine analogues
27	23.1.2025	Antihistaminic agents, 5-Hydroxytryptamine and its agonists and antagonists
28	27.1.2025	Eicosanoids, platelet activating factors
29	28.1.2025	Angiotensin, bradykinin and kallidin

Unit-3: DRUGS ACTING ON CENTRAL NERVOUS SYSTEM

S.NO.	Date	Topics
30	29.1.2025	Classification of drugs acting on CNS. History of anaesthesia
31	30.1.2025	Mechanism of general anaesthesia
32	5.2.2025	Stages of general anaesthesia
33	6.2.2025	Inhalant anaesthetics
34	10.2.2025	Intravenous anaesthetics
35	11.2.2025	Dissociative anaesthetics
36	12.2.2025	Hypnotics
37	13.2.2025	Sedatives
38	17.2.2025	Psychotropic drugs
39	18.2.2025	Anticonvulsants
40	19.2.2025	Opioid analgesics
41	20.2.2025	Non-steroidal anti-inflammatory drugs
42	24.2.2025	Analeptics
43	25.2.2025	CNS stimulants
44	27.2.2025	Drugs acting on somatic nervous system
45	3.3.2025	Drugs acting on somatic nervous system
46	4.3.2025	Local anaesthetics
47	5.3.2025	Local anaesthetics
48	6.3.2025	Muscle relaxants
49	10.3.2025	Euthanizing agents

Unit-4: DRUGS ACTING ON DIFFERENT BODY SYSTEMS

S.NO.	Date	Topics
50	11.3.2025	Drugs acting on digestive system: Stomachics, antacids and antiulcers
51	12.3.2025	Drugs acting on digestive system, prokinetics , carminatives and antizymotics
52	17.3.2025	Drugs acting on digestive system: Emetics, antiemetics
53	18.3.2025	Drugs acting on digestive system: Purgatives, antidiarrhoeals
54	19.3.2025	Drugs acting on digestive system: Choleretics and cholagogues
55	20.3.2025	Rumen pharmacology
56	24.3.2025	Drugs acting on cardiovascular system: Cardiotonics and cardiac stimulants
57	25.3.2025	Antiarrhythmic drugs
58	26.3.2025	Vasodilators and antihypertensive agents
59	27.3.2025	Haematopoietic drugs
60	1.4.2025	Coagulants and anticoagulants.
61	2.4.2025	Drugs acting on respiratory system: Expectorants and antitussives, respiratory stimulants
62	3.4.2025	Bronchodilators and mucolytics

63	7.4.2025	Drugs acting on urogenital system: Diuretics
64	8.4.2025	Drugs affecting urinary pH and tubular transport of drugs
65	9.4.2025	Ecbolics and tocolytics.
66	15.4.2025	Pharmacological basis of fluid therapy
67	16.4.2025	Pharmacotherapeutics of hormones
68	17.4.2025	Pharmacotherapeutics of hormones
69	21.4.2025	Drugs acting on skin and mucous membranes: Emollients
70	22.4.2025	Demulcents and counter irritants

Unit-5 VETERINARY CHEMOTHERAPY

S.NO.	Date	Topics
71	23.4.2025	Introduction and historical developments of chemotherapy. Antimicrobial agents: Classification
72	24.4.2025	General principles in antimicrobial chemotherapy, antimicrobial resistance, combined antimicrobial therapy
73	28.4.2025	Sulphonamides and their combination with diaminopyrimidines
74	30.4.2025	Penicillins
75	1.5.2025	Cephalopsorins, cephamycins
76	5.5.2025	Other beta lactams
77	6.5.2025	Beta lactamase inhibitors
78	7.5.2025	Aminoglycosides and aminocyclitols
79	8.5.2025	Tetracyclines
80	12.5.2025	Amphenicols (chloramphenicol, thiamphenicol, florfenicol)
81	13.5.2025	Macrolides
82	14.5.2025	Quinolones and fluoroquinolones
83	15.5.2025	Polypeptides (polymixins, bacitracin) and glycopeptide antibiotics
84	19.5.2025	Miscellaneous agents: Lincosamides, novobiocin
85	20.5.2025	Miscellaneous agents: virginiamycin, tiamulin, nitrofurans and methenamine
86	21.5.2025	Antitubercular drugs
87	22.5.2025	Antifungal agents: Topical and systemic agents
88	26.5.2025	Antifungal agents: anti-fungal antibiotics
89	27.5.2025	Antiviral drugs
90	28.5.2025	Antiviral drugs
91	1.6.2025	Anticancer agents
92	2.6.2025	Anticancer agents
93	3.6.2025	Anthelmintics: Drugs used against nematodes
94	4.6.2025	Anthelmintics: Drugs used against cestodes and trematodes
95	5.6.2025	Antiprotozoal agents: Drugs used in trypanosomosis, theileriosis
96	9.6.2025	Antiprotozoal agents: Babesiosis, coccidiosis.
97	10.6.2025	Antiprotozoal agents: Amoebiosis, giardiosis and trichomoniasis
98	11.6.2025	Ectoparasiticides
99	13.6.2025	Ectoparasiticides
100	17.6.2025	Antiseptics and disinfectants
101	18.6.2025	Pharmacology of drugs of abuse in animals
102	19.6.2025	Pharmacology of indigenous medicinal plants: Scientific name, common name, active principles, pharmacological actions and therapeutic uses of Ginger, ocimum, neem, piper longum, withania, leptadenia, tinospora

103	23.6.2025	Pharmacology of indigenous medicinal plants: embilica, eucalyptus, glycerrhiza
104	24.6.2025	Pharmacology of indigenous medicinal plants: trichospermum, curcuma, adhantoda
105	25.6.2025	Pharmacology of indigenous medicinal plants: butea, aloes, sena
106	26.6.2025	Pharmacology of indigenous medicinal plants: rheubarb, catechu

Unit-6: VETERINARY TOXICOLOGY

S.NO.	Date	Topics
107	30.6.2025	General Toxicology: Definitions. History of toxicology
108	1.7.2025	fundamentals and scope of toxicology
109	2.7.2025	Sources and classification of toxicants
110	3.7.2025	factors modifying toxicity
111	7.7.2025	General approaches to diagnosis
112	8.7.2025	General approaches to treatment of poisoning
113	9.7.2025	Toxicity caused by metals: Arsenic, lead
114	10.7.2025	Toxicity caused by metals: Mercury, copper
115	14.7.2025	Toxicity caused by metals: Molybdenum, selenium
115	15.7.2025	Toxicity caused by non-metals: Phosphorus, fluoride
117	21.7.2025	Toxicity caused by non-metals: Nitrates or nitrites, chlorate
118	22.7.2025	Toxicity caused by: Common salt
119	23.7.2025	Toxicity caused by: Urea
120	24.7.2025	Poisonous plants: Cyanogenetic plants, abrus, ipomoea
121	28.7.2025	Poisonous plants: Datura, nux vomica, castor
122	29.7.2025	Poisonous plants: Oxalate producing plants, plants causing thiamine deficiency
123	30.7.2025	plants causing photosensitization and lathyrism
124	31.7.2025	Poisonous plants: Oleander, and cotton.
125	4.8.2025	Toxicity caused by Agrochemicals: Insecticides - Chlorinated hydrocarbons
126	5.7.2025	Toxicity caused by Agrochemicals: Organophosphates, carbamates
127	6.8.2025	Toxicity caused by Agrochemicals: Pyrethroids, newer insecticides
128	7.8.2025	Toxicity caused by Agrochemicals: Herbicides, fungicides
129	11.8.2025	Toxicity caused by Agrochemicals: Rodenticides
130	12.8.2025	Fungal toxins: Aflatoxins, rubratoxin,
131	13.8.2025	Fungal toxins: Ochratoxin, sporidesmin, citrinin, F-2 toxin, trichothecenes, ergot, fescue
132	13.8.2025	Bacterial toxins: Botulinum toxin and tetanus toxin.
133	18.8.2025	Venomous bites and stings: Snake, scorpion, spider
134	19.8.2025	Venomous bites and stings: Bees and wasp, toad and fishes (puffer fish, shellfish).
135	20.8.2025	Toxicity caused by food additives
136	21.8.2025	Toxicity caused by food preservatives.
137	25.8.2025	Drug and pesticide residue toxicology
138	26.8.2025	Environmental pollutants: Air and water pollutants

139	27.2025	Environmental pollutants: Air and water pollutants
140	1.9.2025	Concept of radiation hazards.
141	3.9.2025	Revision
142	4.9.2025	Revision

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LECTURE SCHEDULE – PRACTICAL

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VETERINARY PHARMACOLOGY & TOXICOLOGY

Credit Hrs. (4+1) w.e.f. 2/12/2024

Practical Lecture Duration: Two hours

Name of Teachers:

Dr. Pawan Kumar Sharma, Dr. Mamta Rani, Dr. Yashpal Shaini, Dr. Abhay Kumar and Dr. Prabhakar Maurya

Unit-1: GENERAL PHARMACOLOGY

S.NO.	Date	Topics
1	Batch-A-2.12.2024 Batch-B-3.12.2024 Batch-C-4.12.2024	Handling and washing of laboratory wares. Handling and operation of commonly used laboratory instruments
2	Batch-A-9.12.2024 Batch-B-10.12.2024 Batch-C-11.12.2024	Concept of good laboratory practices (GLP)
3	Batch-A-16.12.2024 Batch-B-17.12.2024 Batch-C-.18.12.2024	Principles of compounding and dispensing
4	Batch-A-23.12.2024 Batch-B-24.12.2024 Batch-C-25.12.2024	Pharmacy appliances, Metrology,systems of weights and measures. pharmacy calculations.
5	Batch-A-30.12.2024 Batch-B-31.12.2024 Batch-C-1.1.2025	Pharmaceutical processes, Pharmaceutical dosage forms. Prescription writing. incompatibilities

6	Batch-A-6. 1.2025 Batch-B-7. 1.2025 Batch-C-8. 1.2025	Drug standards and regulations. custody of poisons
7	Batch-A-13. 1.2025 Batch-B-21. 1.2025 Batch-C-15. 1.2025	Compounding and dispensing of: Powders, ointments, mixtures, liniments and lotions
8	Batch-A-20. 1.2025 Batch-B-28. 1.2025 Batch-C-22. 1.2025	Compounding and dispensing of: liquors, tinctures, emulsions and electuaries

Unit-2: ANS PHARMACOLOGY

S.NO.	Date	Topics
9	Batch-A-27. 1.2025 Batch-B-11. 2.2025 Batch-C-29. 1.2025	Demonstration of the action of autonomic agonists on intact or isolated preparations of the laboratory animals
10	Batch-A-3. 2.2025 Batch-B-18. 2.2025 Batch-C-5. 2.2025	Demonstration of the action of autonomic antagonists on intact or isolated preparations of the laboratory animals
11	Batch-A-10. 2.2025 Batch-B-25. 2.2025 Batch-C-12. 2.2025	Demonstration of the action of autonomic antagonists on intact or isolated preparations of the laboratory animals
12	Batch-A-17. 2.2025 Batch-B-4. 3.2025 Batch-C-19. 2.2025	Simulated animal experiments should be preferred over use of live animals. The lab for simulated experiments should be established within a span of one year.

Unit-3: CNS PHARMACOLOGY

S.NO.	Date	Topics
13	Batch-A-24. 2.2025 Batch-B-11. 3.2025 Batch-C-5. 3.2025	Handling of lab animals
14	Batch-A-3. 3.2025 Batch-B-18. 3.2025 Batch-C-12. 3.2025	Regulatory guideline for use of lab animals
15	Batch-A-10. 3.2025 Batch-B-25. 3.2025 Batch-C-19. 3.2025	Demonstration of the effect of CNS active drugs

16	Batch-A-17. 3.2025 Batch-B-1. 4.2025 Batch-C-26. 3.2025	Demonstration of the effect of CNS active drugs
17	Batch-A-24. 3.2025 Batch-B-8. 4.2025 Batch-C-2. 4.2025	Demonstration of the effect of local anaesthetics in laboratory animals
18	Batch-A-7. 4.2025 Batch-B-15. 4.2025 Batch-C-9. 4.2025	The lab for simulated experiments should be established within a span of one year

Unit-4: VETERINARY CHEMOTHERAPY

S.NO.	Date	Topics
19	Batch-A-21. 4.2025 Batch-B-22. 4.2025 Batch-C-16. 4.2025	Demonstration of various chemotherapeutic agents and their dosage forms
20	Batch-A-28. 4.2025 Batch-B-6. 5.2025 Batch-C-23. 4.2025	Demonstration of various chemotherapeutic agents and their dosage forms
21	Batch-A-5. 5.2025 Batch-B-13. 5.2025 Batch-C-30. 4.2025	Demonstration of antibiotic sensitivity test and its interpretation
22	Batch-A-12.5.2025 Batch-B-20.5.2025 Batch-C-7.5.2025	Demonstration of antibiotic sensitivity test and its interpretation
23	Batch-A-19.5.2025 Batch-B-27.5.2025 Batch-C-14.5.2025	Demonstration of antibiotic sensitivity test and its interpretation

Unit-5: VETERINARY TOXICOLOGY

S.NO.	Date	Topics
24	Batch-A-26.5.2025 Batch-B-3.6.2025 Batch-C-21.5.2025	Collection of material for toxicological analysis
25	Batch-A-2.6.2025 Batch-B-10.6.2025 Batch-C-28.5.2025	Preservation of material for toxicological analysis
26	Batch-A-9.6.2025 Batch-B-17.6.2025 Batch-C-4.6.2025	Dispatch of material for toxicological analysis
27	Batch-A-16.6.2025 Batch-B-24.6.2025 Batch-C-11.6.2025	General principles for toxicological analysis
28	Batch-A-23.6.2025 Batch-B-1.7.2025 Batch-C-18.6.2025	General principles for toxicological analysis

29	Batch-A-30.6.2025 Batch-B-8.7.2025 Batch-C-25.6.2025	Detection of heavy metals
30	Batch-A-7.7.2025 Batch-B-15.7.2025 Batch-C-2.7.2025	Detection of non-metals
31	Batch-A-14.7.2025 Batch-B-22.7.2025 Batch-C-9.7.2025	Detection of plant poisons
32	Batch-A-21.7.2025 Batch-B-29.7.2025 Batch-C-16.7.2025	Demonstration of agrochemical toxicity and its antidotal therapy via simulation methods
33	Batch-A-28.7.2025 Batch-B-5.8.2025 Batch-C-23.7.2025	Demonstration of agrochemical toxicity and its antidotal therapy via simulation methods
34	Batch-A-4.8.2025 Batch-B-12.8.2025 Batch-C-30.7.2025	Demonstration of toxic weeds and plants of local area.
35	Batch-A-11.8.2025 Batch-B-19.8.2025 Batch-C-6.8.2025	Demonstration of toxic weeds and plants of local area.
36	Batch-A 18.8.2025 Batch-B-26.8.2025 Batch-C-13.8.2025	Methods of calculation of median lethal dose (LD_{50}) or maximum tolerated dose (MTD)
37	Batch-A-25.8.2025 Batch-B-2.9.2025 Batch-C-20.8.2025	Revision
38	Batch-A-1.9.2025 Batch-B Batch-C-27.8.2025	Revision
39	Batch-A- Batch-B Batch-C-3.9.2025	Revision