

Paper – I : Introductory Veterinary Pharmacology

Semester I

Name of course: Introductory Veterinary Pharmacology -I

Course No. AHD 211; Cr. Hrs. 3 (2+1)

Theory

1. Glossary of pharmacology viz. Indian pharmacopoeia, British pharmacopoeia, meteorology
2. Weights and measures; their symbol used during prescription.
3. Description of the Roman Words used in the prescriptions.
4. Compounding and dispensing, powders, mixtures, electuary, ointment, lotion, paste, pulvis, procedure and application/uses.
5. Route of administration of drugs viz. per os, per nose, per rectum, in urogenital tract, topical application etc. injections i.e. intravenous, intramuscular, subcutaneous, intratracheal, intra ruminal.
6. Posology/doses factors affecting dose rate viz. age, body weight, sex, environment, habitat, disease, route of administration, effect of drug, rate of excretion of drug.
7. Pharmaceutical classification, table of veterinary formulae and pharmacopial formulae viz. manufacturing drugs having base as water, alcohol, vinegar, oil etc.
8. Result of drug action.
9. Classification of drugs on the basis of their action e.g. mouth antiseptic, stomachic, aromatic, antisialics, gastric antacid, and anti emetics, carminative, purgative, laxative, astringent, anthelmintics, diuretics, ecbolic, galactagogue, uterine anti coagulant, haemostatic, haematinic, vasodilator, vasoconstrictor, bronchodilator, bronchoconstrictor, expectorant, respiratory stimulant, respiratory sedative, cerebral stimulant, analgesic, sedative, hypnotic, narcotics, tranquillizers, anesthetic, euthanasia, mydiatriatic, myotic, antipyretic, alterative tonic, nutrient, vitamins, anti histaminics, anti inflammatory, irritant, caustic, traumatic, refrigerants, detergents, deodorants, antibiotics, antiseptics, anti-parasitic.

Practical

1. An introduction to basic pharmacology laboratory.
2. Basic knowledge of weights , measures and weighing.
3. An introduction to compounding and dispensing.
4. Powders
5. Mixtures
6. Electuary
7. Ointment
8. Lotion
9. Paste
10. Pultice
11. Administration of drugs viz. per os, per rectum, injections (I/M,I/V,S/C,I/ruminal) etc .
12. To understand prescription of veterinarian and to treat animal accordingly

13. Functions of alcohol , potassium permanganate , iodine, paraffins, wax etc. in pharmacology preparations

Semester II

Name of course: Introductory veterinary pharmacology -II

Course No. AHD 212; Cr. Hrs. 3 (2+1)

Theory

1. Materia Medica

- a) Alkali metal and ammonia- sodium chloride, sodium hydroxide, sodium carbonate, sodium bicarbonate, potassium chloride, potassium permanganate, potassium carbonate, potassium bicarbonate, potassium nitrate, potassium iodide, sodium citrate, ammonium chloride, liquor ammonia fort, ammonium carbonate, spirit ammonia aromaticus.
- b) Alkali earth metal- calcium chloride, calcium gluconate, calcium borogluconate, calcium lactose, calcium phosphate, calcium hydroxide, creatapreparata, plaster of Paris, magnesium carbonate, magnesium sulphate.
- c) Heavy metals – Aluminium hydroxide, kaolin, lead acetate, zinc sulphate, zinc oxide, calamine, copper sulphate, silver nitrate, mercurous chloride (calomel), bin iodide of mercury, mercurochrome, argirol, pretargol, ferrous sulphate, ferric chloride, tincture ferri-perchloride, cobalt chloride.
- d) Metalloids- bismuth carbonate, bismuth sub nitrate, potassium antimony tartrate (tartar emetics), acetyl arsan, suramin, arsenic trioxide, calcium glycerophosphate.
- e) Non-metal halogen- chlorine, iodine, oxygen, sulphur (sublimed), wood charcoal.

2. Systemic Pharmacology

- a) Drugs action on Brain, nervous system – volatile general anaesthetic (chloroform, ether, trilene, ethylene, CCl₄), Narcotics (Alcohol), chloral hydrate, urea derivatives (Barbiturates) sulfonyl, group (Sulfonal), Alkaloid narcotics (opium, morphine, codeine) Cannabis, Cocaine, Nux vomica, Nikethamide, musk, Belladonna, hyocyamus, Dhatura stramonium, vasaka, Tobacco, carbachol.
- b) Drugs action on digestive system -
 - i. Digestive ferments, vegetable bitters and sweetening agents – Pulv zinger, malt, pepsin, sucrose, honey, saccharine
 - ii. Purgative – Castor oil, tincture asafetida, oil of alsi, croton oil, linseed oil, aloe
 - iii. Emollients and demulcents – Olive oil, groundnut oil, cotton seed oil, mustard oil, coconut oil, liquid paraffin, glycerin, gum acacia, starch, barley
 - iv. Vegetable astringent – Tannic acid, catechu
 - v. Volatile oil –
 - vi. Carminative group – clove oil, cardamom, coriandrum, Antithum, Anisi, Cinnamon.
 - vii. Counter irritant group – Turpentine, eucalyptus, capcicum, black pippier, garlic, onion.
- c) Urinary antiseptic and diuretic –sandle wood
 - i. Solid volatile oil – Camphor, menthol, thymol

- ii. Aloe, Gum, Resins – Asafoetida
- d) Anthelmintic
 - i. Round worm and hook worm – Oil of chinapodium, piperazine adipate, diethyl/carbamazine CCl_4 .
 - ii. Stomach worm – Fenovas, promentic, Butia semina, Beronia
 - iii. Tapeworm – Nux acacia, Diclorofen, Kamala, Pumpkin seed
 - iv. Fluke worm – CCl_4
 - v. Blood worm – Tarter emetics, Neguvon
- e) Drugs action on circulatory system – cardiac depressant (aconite) cardiac tonic (digitalis, siquil) vasoconstrictor (adrenaline, amphetamine), vasodilator (amylnitrate).
- f) Drugs act on respiratory system – expectorant (ipecacuhana)
- g) Drugs act on reproductive system – Caffeine, sodium salicylate, potassium nitrate, theobromine, theophylline, ergot, oxytocin,
- h) Drugs act on skin (integumentary system) – Paraffin, Vaseline, lard wax, gamaxene, soap, detergent, cetramide etc.
- i) Dosage and mode of action of sulpha drugs and antibiotics used for the treatment of animal disease.
- j) Incompatibility, toxic drugs and prevention thereof.

Practical

1. Importance of following in Pharmacological preparations : sodium chloride, potassium permanganate, potassium iodide, sodium citrate, liquor ammonia fort, spirit ammonia aromaticus , calcium borogluconate, plaster of paris, magnesium sulphate, zinc sulphate, kaolin, calamine, silver nitrate, bin iodide of mercury, bismuth subnitrate, iodine, sulphur, charcoal.
2. Collection of blood, urine, faeces and milk for laboratory examination and dispatch of samples.
3. To prepare carminatives.
4. To prepare astringents.
5. Common names and uses of counter irritants, purgatives, urinary antiseptics, anthelmintics. Incompatibility of drugs.