

ANDHRA UNIVERSITY
B. Vocational course Dairy
ing & Animal husbandry
III Year–
Semester V 2020-
21 Admitted batch
VETERINARY PHARMACOLOGY
Credits (4+2=6)

UNIT-1

Introduction, historical development, branches and scope of Pharmacology. Sources and nature of drugs. Pharmacological terms and definitions, nomenclature of drugs.

UNIT-2

Principles of drug activity: Pharmacokinetics-

Routes of drug administration, absorption, distribution, biotransformation and excretion of drugs.

UNIT-3

Pharmacodynamics- Concept of drug and receptor, dose-response relationship, terms related to drug activity and factors modifying the drug effect and dosage. Adverse drug reactions, drug interactions

UNIT-4

Classification of drugs. History, mechanism and stages of general anaesthesia. Inhalant, intravenous and dissociative anaesthetics.

UNIT-5
Hypnotics and sedatives; psychotropic drugs, anticonvulsants, opioid analgesics, non-steroidal anti-inflammatory drugs, analeptics and other CNS stimulants. Local anaesthetics, muscle relaxants. Euthanizing agents. Fluid therapy.

PRACTICALS

Handling and washing of laboratory wares.

Handling and operation of commonly used laboratory instruments. Concept of good laboratory practices (GLP).

Pharmacy appliances. Principles of compounding and dispensing. Metrology, systems of weights and measures, pharmacy calculations. Pharmaceutical processes. Pharmaceutical dosage forms.

Prescription writing, incompatibilities.

Reference books:

1. Veterinary Pharmacology

Vallachira
Aravindan

2. Essentials Of Veterinary Pharmacology And Therapeutics

HS
Sandhu

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Model paper

Time: 3hrs

Maximum: 75 marks

SECTION – A

Answer any **FIVE** questions. Each question carries equal marks. (5X5=25)

1. Write about muscle relaxants.
2. Describe in detail about different stages of general anaesthesia.
3. Write in brief about euthanizing agents.
4. Write short notes on antitussives.
5. Describe in detail about antidiarrhoeal drugs.
6. Write short note about bronchodilators.
7. Write about nonsteroid anti-inflammatory drugs in detail.
8. Classify antiparasitic drugs.

SECTION – B

Answer **ALL** the questions. Each question carries **TEN** marks

(5X10=50)

1. a. Write about different routes of drug administration.
(or)
b. Write about different factors which effect drug action.
2. a. Classify intravenous anaesthetics, local anaesthetics
(or)
b. Write about fluid therapy.
3. a. Explain in detail about adverse drug reactions.
(or)
b. Classify different types of purgatives.
4. a. Give classification of penicillins in detail.
(or)
b. Classify aminoglycosides in detail.
5. a. Write in detail about biotransformation and excretion of drugs.
(or)
b. Write in detail about drug and receptor, drug-dose response

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DAIRY PLANT MANAGEMENT
(Credits 4+2=6)

UNIT-1

Dairy equipment for fluid milk processing – Introduction – The Dairy Plant – Milk Collection or Chilling Centre – Milk Reception and Storage – Pasteurizer and Sterilizer – Homogenizer and Centrifuges – Packaging and Filling – Clean-in-place (CIP) – Cleaning System.

UNIT-2

Dairy equipment for products processing – Objectives – Introduction – Butter and Cheese Making Equipment – Ice-Cream Making Equipment – Evaporators and Dryers.

UNIT-3

Ghee Making Equipment – Khoa Making Equipment – Dahi and Lassi Making Equipment – Paneer, Chana & Casein Making Equipment

UNIT-4

Materials their characteristics and selection of equipment – Objectives – Introduction – Types of Materials – Properties of Materials – Corrosion and its Prevention – Choice of Materials – Milk Handling and Processing Equipment – Selection of Utilities

UNIT-5

Preventive maintenance of dairy plants and machineries – Principles of Preventive Maintenance Development of Plant Maintenance Programme – Guidelines for Effective Lubrication – Care and Cleaning of SS Surface – Care of Pipes and Fittings – Maintenance of Rubber and Gaskets Dairy Building Sanitation Dairy effluent management.

PRACTICALS:

Visit to milk collection centre
Visit to milk chilling centre.
Visit to various units of dairy plant.
Hands-on training in preparation of various milk products.
Handling of different dairy equipment

REFERENCE BOOKS:

Ahmad Tufail. (1990). Dairy Plant Systems Engineering. Kitab Mahal Publisher, Allahabad.
Anantakrishnan. C.P. and Simha N.N. (1987). Dairy Engineering Technology and Engineering of Dairy Plant operation

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DAIRY PLANT MANAGEMENT
(Credits 4+2=6) Mod
el paper

Time: 3hrs

Maximum: 75 marks

Section-A

Answer any FIVE questions. Each question carries equal marks. (5x5=25)

1. Describe factors for establishing a dairy plant.
2. Name the facilities available at the collection centre?
3. What are the time and temperature combinations of sterilization process?
4. What is the principle of centrifugation?
5. Explain the operation of churn.
6. Explain process difference in dahi and lassi making.
7. How do we prevent corrosion of metals?
8. Write in detail about Dairy effluent management?

Section-B

Answer all the questions. Each question carries TEN marks. (5x10=50)

1. A) What are the basic equipment used in a dairy plant?
(or)
B) Write various sections of a dairy plant.
2. A) Describe the differences between a separator and a clarifier.
(or)
B) Explain the working of a continuous freezer.
3. A) Explain the working of a spray dryer used for milk.
(or)
B) Give the working of a homogenizer and explain what are the advantages of homogenization.
4. A) Explain the working of a multipurpose process vat used for dahi making.
(or)
B) Explain the equipment used for making ghee and khoa.
5. A) Distinguish between internal checkup and major overhaul.
(or)
B) Describe the importance of proper selection of dairy equipment.

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FUNDAMENTALS OF VETERINARY MEDICINE
Credits (4+2=6)

UNIT-1

History and scope of Veterinary Medicine, concept of animal diseases. Concepts of diagnosis, differential diagnosis, treatment and prognosis.

UNIT-2

General systemic states, hyperthermia, hypothermia, fever, shock, allergy, oedema, coma.

UNIT-3

Etiology, clinical manifestations, diagnosis, treatment of diseases of digestive system, respiratory system, cardiovascular system and urinary system

UNIT-4

Etiology, clinical manifestations, diagnosis, treatment of diseases of nervous, musculoskeletal, haemopoietic system and skin.

UNIT-5

Deficiency diseases caused by deficiency of iron, copper, cobalt, zinc, manganese, selenium, calcium, phosphorus, magnesium, iodine, vitamin A, D, E, B complex, K and C.

PRACTICALS

Collection of history and general clinical examination.

Collection, preservation, packing and dispatch of samples from clinical cases.

Nasogastric and orogastric intubation in animals.

Gastric and peritoneal lavage.

Collection and examination of cerebrospinal fluid. Blood transfusion
Methods of medication

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FUNDAMENTALS OF VETERINARY MEDICINE
(Credits 4+2=6)
Model paper

Time: 3hrs

Maximum: 75 marks

SECTION – A

Answer any **FIVE** questions. Each question carries equal marks. (5*5=25)

1. Define fever and list out common causes of fever in livestock.
2. Write a note on etiology, symptoms and treatment of anaemia?
3. Write about causes of vomitings and its treatment
4. Write a note on shock in animals
5. Write about pica – causes, symptoms and treatment.
6. Write about rickets and Osteomalacia.
7. Write about common causes of itching/pruritis in dogs?
8. Describe clinical signs of aspiration pneumonia and its treatment?

SECTION – B

Answer **ALL** the questions. Each question carries **TEN** marks (5*10=50)

1. Write a detailed note on pericarditis in cattle.
(or)
Write a detailed note on congestive heart failure in buffaloes.
2. Write a detailed note on causes of colic?
(or)
Write a detailed note on blood transfusions?
3. Write in detail about Acute renal failure?
(or)
Write about Haematuria and urinary incontinence in bovines?
4. Write a detailed note on Simple indigestion and its treatment in bovines?
(or)
Write a note on causes, Symptoms and treatment of allergic dermatitis?
5. Enlist the deficiency diseases caused by deficiency of vitamins and discuss in detail of any two?
(or)
Write about concept of diagnosis, differential diagnosis, & treatment?

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VETERINARY CLINICAL PRACTICE
Credits (4+2=6)

UNIT-1

History and scope of veterinary medicine. Case history
Dehydration, Fluid therapy

UNIT-2

Acid indigestion, Alkaline indigestion, Impaction
Bloat
Bovine ketosis
Mastitis
Milk fever
White scours
Poisoning

UNIT-3

Repeat breeding
Pyometra
Dystocia
Prolapse
Retention of placental membranes

UNIT-4

Wound management
Abscess
Maggot wound
Evisceration of eye balls
Medial patellar desmotomy
Horn amputation
Rumenotomy
C- section

UNIT-5

Preparation of animal for surgery
Post surgical management

PRACTICALS

Disinfection
Sterilization
Diagnosis
Differential diagnosis
Systemic diseases in large animals
Metabolic diseases in large animals

Referencebooks:

1. TextbookofclinicalveterinarymedicineDr.Amalenduchakravarthi
2. Smallanimalinternalmedicine Ettinger
3. Largeanimalinternalmedicine BradfordandSmith
4. Handbookforveterinaryclinicians
Dr.A.U.BhikaneandDr.S.B.Kawitkar
5. Ahandbookforveterinaryphysician V.P.Sapre

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VETERINARY CLINICAL PRACTICE
(Credits 4+2=6)
Model paper

Time: 3hrs

Maximum: 75 marks

SECTION-A

Answer any **FIVE** questions. Each question carries equal marks. (5*5=25)

1. Write in detail about scope of veterinary medicine..
2. Write in detail about bloat.
3. Write about case history.
4. Write about poisoning in animals.
5. Discuss in detail about abscess.
6. Write about preparation of animal for surgery.
7. Discuss post surgical management.
8. Write in detail about maggot wound in large animals.

SECTION-B

Answer **ALL** the questions. Each question carries **TEN** marks (5*10=50)

1. Write in detail about fluid therapy
(or)

Discuss about history of veterinary medicine

2. Write about mastitis, causes, clinical symptoms, diagnosis, treatment and prevention?

(or)

Write about acid digestion, causes, clinical symptoms, diagnosis, treatment?

3. Write about repeat breeding, causes, clinical symptoms, diagnosis, treatment?

(or)

Write about pyometra, causes, clinical symptoms, diagnosis, treatment

4. Write about milk fever, causes, clinical symptoms, diagnosis, treatment

(or)

Write about horn amputation in large animals

5. Write about prolapse, causes, clinical symptoms, diagnosis, treatment

(or)

Write about various types of wounds in animals

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BASICS OF VETERINARY SURGERY
Credits (4+2=6)

UNIT-1

Introduction: Historical perspective, Definitions, classification of surgery. Tenets of Halsted.

UNIT-2

History taking, physical examination. Pre-operative, intra-operative and post-operative considerations

UNIT-3

Sterilization and disinfection: Definitions, surgical sterilization, various methods of sterilization (Heat, chemical and radiation etc.), disinfections. **UNIT-4**

Sutures: Definitions, suturing, factors influencing suturing, characteristics of an ideal suture material, types of suture material – absorbable and non-absorbable, surgical knots, various suture patterns – apposition, eversion, inversion and special.

UNIT-5

Basic surgical affections: Definitions, classification, diagnosis and treatment of abscess, tumour, cyst, hernia, haematoma, necrosis, gangrene, burn and scald, frostbite. Haemorrhage and hemostasis.

Fractures.

Major surgeries of cattle and dogs.

PRACTICALS

Introduction to layout of operation theatre and surgical unit. Introduction of common surgical equipment and instruments. Suture materials, surgical knots and suture patterns.

General examination of surgical patients. Preparation of surgical patients. Other operation theatre routines like sterilization, preparation of theatre, Surgeon and surgical pack.

Bandaging and basic wound management Demonstration (or Audio visual aids) of surgery, control of haemorrhage and suturing

Reference books:

A Textbook On Veterinary Surgery and Radiology

Textbook of Veterinary surgery

Dollor's Veterinary surgery

Veterinary surgery

Veterinary Surgery

S. KNANDI Esse

Venugopalan S

O'Connor JJ

ER Frank

Spencer A Johnston

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BASIC SOF VETERINARY SURGERY
Credits (4+2=6) Mod

el paper

Time: 3hrs

Maximum: 75 marks

SECTION – A

Answer any **FIVE** questions. Each question carries equal marks. (5*5=25)

1. Halsted principles of surgery
2. What is an abscess and how it is differentiated from Cyst, Haematoma, Tumour and hernia.
3. Write in detail about preparation of patient before surgery?
4. Define sterilization? Write in detail about various methods of sterilization.
5. Write in detail about postoperative care of animal.
6. Classify wounds? List out the factors responsible for delayed wound healing.
7. Explain various types of surgeries in animal practice.

SECTION – B

Answer All the questions. Each question carries TEN marks (5*10=50)

1. a. Non absorbable synthetic suture materials
(or)
b. Explain the four phases of wound healing.
2. a. Different methods of haemostasis
(or)
b. Write in detail about fractures and also classify them.
3. a. Treatment for Burns
(or)
b. List out various surgical instruments and their uses.
4. a. Write down various surgical affections of pelvic cavity of dog
(or)
b. What is hernia? Explain the procedure for operation of umbilical hernia.
5. a. Write down various surgical affections of abdominal cavity of cattle
(or)
b. Write in detail about absorbable suturing material

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III Year –
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VETERINARY GYNAECOLOGY, OBSTETRICS AND AI
Credits (4+2=6)

UNIT-1

Anatomy of female and male reproductive tract of livestock. Puberty and sexual maturity.

UNIT-2

Oestrous cycle and factors affecting the length of the oestrous cycle, problems in oestrus detection and oestrus detection aids.

UNIT-3

Pathological affections of ovary, uterine tubes, uterus, cervix, vagina and external genitalia.

UNIT-4

Pregnancy diagnosis - Duration of pregnancy - Factors affecting gestation length.

UNIT-5

Care and management of pregnant animals. Stages of parturition. Forms of female and male infertility in bovines.
Artificial insemination techniques in farmed and pet animals

PRACTICALS

Study of female and male genital organs using slaughterhouse specimens
Oestrus detection in farmed animals
Techniques of rectal palpation of female reproductive tract
Gynaecological equipment and instruments
Vaginal exfoliative cytology and vaginoscopy
Equipment and technique
Vasectomy and castration
Handling and maintenance of LN₂ containers

Reference books:

1. Veterinary obstetrics and genital diseases
Stephen J. Roberts
 2. Applied veterinary gynaecology and obstetrics
Dr. Pradeep Kumar
 3. Veterinary reproduction and obstetrics
Geoffrey H. Arthur
 4. Veterinary Reproduction and Obstetrics
J. Parkinson & Gary C. W.
- David E. Noakes, Timothy

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VETERINARY GYNAECOLOGY, OBSTETRICS AND AI
(Credits 4+2=6)
Model paper

Time: 3hrs

Maximum: 75 marks

SECTION – A

Answer any **FIVE** questions. Each question carries equal marks. (5*5=25)

1. Write in detail regarding factors effecting gestational length.
2. Explain regarding factors that influence puberty and sexual maturity.
3. Write about different techniques used for pregnancy diagnosis in animals.
4. Discuss in detail about estrus cycle in bovines.
5. Write about the pathological affections of ovary in cow?
6. Draw the diagram of buffalo's female reproductive tract.
7. Discuss about procedure of artificial insemination in cattle.
8. Enumerate gestational periods in different species and define the term Gestation

SECTION – B

Answer **All** the questions. Each question carries **TEN** marks (5*10=50)

1. A) Write in detail about factors effecting gestational length.
(or)
B) Write about technique of vaginal exfoliative cytology in bitches.
2. A) Discuss about care and management of Pregnant animals
B) Explain about stages of parturition in cattle.
3. A) Discuss about estrus detection aids used for cattle.
(or)
B) Write about handling and maintenance of LN2 containers.
4. A) Discuss in detail regarding Impotentiagenendi
(or)
B) Discuss in detail about the estrous cycle in bitches.
5. A) Discuss in detail about pathological affections of uterus?
(or)
B) Draw diagrams of different cell sex exposed during vaginal cytology in bitches.