

**SRI VENKATESWARA UNIVRRSITY: TIRUPATI**  
**B.VOC, in DAIRYIING AND ANIMAL HUSBANDRY**  
**Under CBCS W.E.F.2022-23**  
**COURSE STRUCTURE**  
**SEMESTER-V**

<b>S. No</b>	<b>Courses</b>	<b>Name of the subject</b>	<b>Total marks</b>	<b>Mid Sem exam</b>	<b>Sem end exam</b>	<b>Teaching hours</b>	<b>Credits</b>
1	Core subject	Veterinary Pharmacology (Theory)	100	25	75	4	4
		Veterinary Pharmacology (Practical)	50	--	50	2	2
2	Core subject	Dairy Plant Management (Theory)	100	25	75	4	4
		Dairy Plant Management (Practical)	50	--	50	2	2
3	Core subject	Fundamentals of Veterinary Medicine (Theory)	100	25	75	4	4
		Fundamentals of Veterinary Medicine (Practical)	50	--	50	2	2
4	Core subject	Veterinary Clinical Practice (Theory)	100	25	75	4	4
		Veterinary Clinical Practice (Practical)	50	--	50	2	2
5	Core subject	Basics of Veterinary Surgery (Theory)	100	25	75	4	4
		Basics of Veterinary Surgery (Practical)	50	--	50	2	2
6	Core subject	Veterinary Gynaecology, Obstetrics and AI (Theory)	100	25	75	4	4
		Veterinary Gynaecology, Obstetrics and AI (Practical)	50	--	50	2	2
<b>Total</b>			<b>900</b>	<b>150</b>	<b>750</b>	<b>36</b>	<b>36</b>

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**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.

Drug standards and regulations, custody of poisons.

Compounding and dispensing of powders, ointments, mixtures, liniments, lotions, liquors, tinctures, emulsions and electuaries.

Demonstration of various chemotherapeutic agents and their dosage forms

**Reference books:**

1. Veterinary Pharmacology Vallachira  
Aravindan
  
2. Essentials Of Veterinary Pharmacology And Therapeutics H S  
Sandhu

3. Handbook of Veterinary Pharmacology
4. Veterinary Pharmacology And Toxicology
5. Essentials of Medical Pharmacology

Walter  
B.K.Roy  
KD Tripathi

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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 defferent dairy equipment

**REFERENCE BOOKS:**

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

Kessler H.G. (1981). Food Engineering and Dairy Technology. Verlag A. Kessler, P.O.Box 1721, Dairy Engineering Division-8050, Freising (Germany)

Warner James. (1976).  
Principles of Dairy Processing. Wiley Eastern Ltd. Publisher, New Delhi.  
Warner James N. (1976).  
Principle of Dairy Processing. Wiley Eastern Limited Publisher, New Delhi

Newcomer, J.L. (1981).  
Preventive Maintenance Manual for Dairy Industry. Venus Trading Co.,  
P.O.Box 17. ANAND 388 001.

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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, septicemia, toxemia, shock, allergy, anaphylaxis, oedema, coma, anaemia

**UNIT – 3**

Etiology, clinical manifestations, diagnosis, differential diagnosis, treatment, prevention and control of diseases of cattle, dog, poultry.

**UNIT – 4**

Diseases of digestive, respiratory, cardiovascular, urinary, nervous, musculoskeletal, haemopoietic, and lymphatic systems, skin.

**UNIT – 5**

Diagnosis and management of 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.

Examination of eye and ear.

Oxygen therapy in veterinary practice.

Gastric and peritoneal lavage.

Collection and examination of cerebrospinal fluid. Blood transfusion

Methods of medication

**Reference books:**

1. Text book of clinical veterinary medicine Dr.Amalendu chakravarthi
2. Small animal internal medicine Ettinger
3. Large animal internal medicine Bradford and Smith
4. Hand book for veterinary clinicians Dr.A.U.Bhikane and Dr.S.B.Kawitkar
5. A hand book for veterinary physician V.P. Sapre

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**VETERINARY CLINICAL PRACTICE**  
**Credits (4+2=6)**

**UNIT -1**

History and scope of veterinary medicine.  
Case history  
Dehydration  
Fever, septicemia, shock, coma.  
Fluid therapy

**UNIT -2**

Acid indigestion  
Alkaline indigestion  
Impaction  
Bloat  
Traumatic reticular peritonitis  
Bovine ketosis  
Mastitis  
Milk fever  
Toxemia  
White scours  
Poisoning

**UNIT - 3**

Concept of Artificial insemination  
Repeat breeding  
Pyometra  
Dystocia  
Prolapse  
Retention of placental membranes

**UNIT -4**

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

**UNIT -5**

Disinfection  
Sterilization of equipment

Preparation of animal for surgery  
Post surgical management

### **PRACTICALS**

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

### **Reference books:**

1. Text book of clinical veterinary medicine Dr.Amalendu chakravarthi
2. Small animal internal medicine Ettinger
3. Large animal internal medicine Bradford and Smith
4. Hand book for veterinary clinicians Dr.A.U.Bhikane and Dr.S.B.Kawitkar
5. A hand book for veterinary physician V.P. Sapre

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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, clinico-pathological testing.  
Pre-operative, intra-operative and post-operative considerations

**UNIT - 3**

Sterilization and disinfection: Definitions, surgical sterilization, various methods of sterilization (Heat, chemical and radiations 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, frost bite and surgical affections of muscles, artery and vein, sinus and fistula.

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

Essentials of Veterinary surgery

Dollor's Veterinary surgery

Veterinary surgery

Veterinary Surgery

S.K NANDI

Venugopalan S

Oconnor JJ

E R Frank

Spencer A Johnston



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

**UNIT -1**

Anatomy of female and male reproductive tract of live stock. Puberty and sexual maturity.

**UNIT - 2**

Oestrous cycle and factors affecting the length of the oestrous cycle-  
Aberrations of oestrus and their clinical management and problems in  
oestrus detection and oestrus detection aids.

**UNIT -3**

Pathological affections of ovary, uterine tubes, uterus, cervix , vagina and  
external genitalia and male 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 farm and pet animals

**PRACTICALS**

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

**Reference books:**

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

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B.VOC. EXAMINATION IN **DAIRYING AND ANIMAL HUSBANDRY**

V - SEMESTER Under  
CBCS W.E.F. 2022-23

Time: 3 hours

MODEL QUESTION PAPER

Marks: 75

SECTION - A

Answer **ALL** of the following

5X2=10Marks

- 1.
- 2.
- 3.
- 4.
- 5.

SECTION - B

Answer any **THREE** of the following

3X5=15Marks

- 6.
- 7.
- 8.
- 9.
- 10.

SECTION - C

Answer **ALL** of the following

5X10=50Marks

11. A  
(or)  
B
12. A  
(or)  
B
13. A  
(or)  
B
14. A  
(or)  
B
15. A  
(or)  
B