

# DEPARTMENT OF VETERINARY GYNAECOLOGY AND OBSTETRICS

## SEMESTER -VII

### VETERINARY GYNAECOLOGY

**VGO-411**

**Credit Hours 2+1=3**

#### **THEORY**

Clinical evaluation and abnormalities of reproductive tracts in domestic animals. Delayed Puberty and sexual maturity. Estrus detection. Aberrations of estrus and estrous cycle. Seasonal breeding. Pregnancy diagnosis- different methods- in different species. Superfoetation and Superfecundation. Fertility, Infertility & sterility- Anatomical, hereditary, nutritional, managerial, hormonal and infectious causes. Anoestrus, ovulatory defects and cystic ovarian degeneration. Repeat breeding: Fertilization failure, early embryonic mortality. Specific & non- specific infections affecting genital organs-endometritis, cervicitis, vaginitis. Fertility parameters. Sexual health control and reproductive health management. Clinical use of hormones in female infertility. Breeding management mismating, pseudopregnancy, transmissible venereal tumor-(TVT) in bitches  
Induction of estrus, Synchronization of estrus, Follicular Dynamics, Ovulation, Superovulation, and Embryo Transfer Technology. Immune-modulation for enhancement of fecundity

#### **PRACTICAL**

Study of female genitalia and its biometry. Methods of estrus detection in farm and companion animals including vaginal cytology. Collection and examination of vaginal mucus by various techniques. Demonstration of different hormonal preparations and their uses. Different protocols for induction and Synchronization of estrus, superovulation and embryo transfer. Pregnancy diagnosis and its differential diagnosis. Use of gynaecological instruments and appliances. Evaluation of female animals for breeding soundness. Demonstration of reproductive pathological conditions using museum specimens. Sexual health control, life history card for the female, recording system for reproductive performance. Demonstration of ultrasonographic imaging of reproductive organs and pregnancy. Oocyte collection and grading.

## REFERENCE BOOKS

1. Reproduction in Farm Animals by Hafez & Hafez
2. Arthur's Veterinary Reproduction & Obstetrics by Noakes et al
3. Diagnostic & Therapeutic Techniques in Animal Reproduction by Zemjanis  
Veterinary Obstetrics & Genital Diseases by S.J.Roberts

## SEMESTER- VIII

### VETERINARY OBSTETRICS

**VGO 421**

**Credit Hours 1+1=2**

#### **THEORY**

Types and functions of placenta in different species. Diseases & accidents during gestation- Abortion in domestic animals-diagnosis & control. Dropsy of fetal membranes and fetus. Fetal "mummification, maceration, pyometra and mucometra. Prolonged gestation. Teratology. Premature birth. Uterine torsion.

Cervico-vaginal prolapse. Termination of pregnancy. Parturition. Puerperium and involution of uterus in domestic animals. Care and management of dam and newborn.

Dystocia- Types of dystocia - maternal & fetal- approach, diagnosis and treatment Epidural & other anesthesia in obstetrical practice. Obstetrical operations- rmutation, forced extractions, fetotomy and cesarean section. Injuries and diseases in relation to parturition.

Postpartum diseases and complications: uterine prolapse, retention of fetal membranes, metritis, postpartum paraplegia.

Animal birth control- ovariohysterectomy and non surgical interventions

#### **PRACTICAL**

Study of pelvis and Pelvimety. Assessment of fetal age. Demonstration of different types of placenta. Use of obstetrical instruments. Epidural and other obstetrical anaesthesia. Manipulation of fetal malpresentation in Phantom Boxes. Approach and treatment of obstetrical cases. Handling of prolapse of genitalia-application of. vulvar sutures. Foetotomy. Caesarean section Post operative care and management of obstetrical cases. Demonstration of ovariohysterectomy

## REFERENCE BOOKS

1. Veterinary Obstetrics & Genital Diseases by S.J.Roberts
2. Arthur's Veterinary Reproduction & Obstetrics by Noakes et al
3. Diagnostic & Therapeutic Techniques in Animal Reproduction by Zemjanis  
Veterinary Obstetrics by Benesch
4. Fleming's Veterinary Obstetrics by Graig

## **SEMESTER- IX**

### **VETERINARY ANDROLOGY AND REPRODUCTIVE TECHNIQUES**

**VGO-511**

**Credit Hours 1+1=2**

#### **THEORY**

Introduction to Andrology. Development of male genitalia and gonads. Puberty, sexual maturity, sexual behaviour and libido. Factors affecting maturity and sex drive in bulls. Forms of male infertility. Factors causing infertility in male, its diagnosis and treatment. Abnormalities, malformations, diseases of male genitalia and coital injuries, their diagnosis and treatment. Testicular hypoplasia and degeneration. Diseases of the accessory sex glands. Introduction, history, development, advantages and limitations of artificial insemination (A.I.). Methods of semen collection in various species. Factors affecting quality and quantity of semen. Macroscopic/physical, microscopic, biochemical and biological tests for evaluation of semen. Extenders used for semen preservation. Extension of semen, preservation of semen at different temperatures. Storage and shipment of semen. Technique of A.I.

#### **PRACTICAL**

Planning and organization of A.I. Centre. Selection, care, training and maintenance of breeding bulls for A.I. Andrological investigations for breeding soundness of bulls. Castration in different species, preparation of teaser bulls. Care, sterilization, storage and upkeep of equipments used for artificial Insemination. Preparation of A.V Collection of semen. Evaluation of semen (Macroscopic/physical, microscopic, biochemical and biological tests). Preparation of extender and Extension of semen. Preservation techniques at different temperatures. Freezing of semen. Insemination techniques for chilled and frozen semen. Recording Systems. Handling and shipment of frozen semen and liquid nitrogen containers at field level.

#### **REFERENCE BOOKS**

1. Physiology of Reproduction and A I of Cattle by Salisbury
2. Text Book of Veterinary Andrology by Sahni & Varma
3. Semen of Animals and it's use for A I by Anderson & James
4. Breeding problems & Artificial Insemination by Renseberg
5. Veterinary Obstetrics & Genital Diseases by S.J.Roberts
6. Arthur's Veterinary Reproduction & Obstetrics by Noakes et all