



# HIMALAYAN UNIVERSITY, ARUNACHAL PRADESH

## DIPLOMA IN PARAMEDICAL

### (VETERINARY PHARMACY)

#### 1<sup>st</sup> YEAR

#### 1<sup>st</sup> Semester

S. NO.	SUB. CODE	SUBJECT NAME	MARKS			PASS
			INTERNAL	THEORY	TOTAL	
1	101	General English	30	70	100	40
2	102	Pharmacy	30	70	100	40
3	103	Structure and Function of Body	30	70	100	40
4	104	Live Stock and Poultry Production Management	30	70	100	40
5	105	Practical	30	70	100	40

#### 2<sup>nd</sup> Semester

S. NO.	SUB. CODE	SUBJECT NAME	MARKS			PASS
			INTERNAL	THEORY	TOTAL	
1	201	Basics of Computer Science	30	70	100	40
2	202	Animal Breeding	30	70	100	40
3	203	Animal Nutrition	30	70	100	40
4	204	Elementary Medicine	30	70	100	40
5	205	Practical	30	70	100	40

#### 2<sup>nd</sup> YEAR

#### 3<sup>rd</sup> Semester

S. NO.	SUB. CODE	SUBJECT NAME	MARKS			PASS
			INTERNAL	THEORY	TOTAL	
1	301	Surgery	30	70	100	40
2	302	Gynecology	30	70	100	40
3	303	Clinical Practice	30	70	100	40
4	304	Practical				

#### 4<sup>th</sup> Semester

S. NO.	SUB. CODE	SUBJECT NAME	MARKS			PASS
			INTERNAL	THEORY	TOTAL	
1	401	Reproduction Artificial Insemination and Storage of Semen	30	70	100	40
2	402	Animal Products Technology	30	70	100	40
3	403	Hospital Training	30	70	100	40

# HIMALAYAN UNIVERSITY, ARUNACHAL PRADESH

## DIPLOMA IN PARAMEDICAL

### (VETERINARY PHARMACY)

#### 1<sup>st</sup> YEAR

#### 1<sup>st</sup> Semester

### **General English (101)**

**Pre- Requisites of written Communication:** One word substitution, Idioms and Phrases, Capital letters(use), Abbreviation, Antonyms, Synonyms, Word formation: prefix, suffix, Transformation of sentences: Interrogative to assertive & to negative & vice-versa.

#### **UNIT II**

Reading Skills: Characteristics of reading, Types of reading, Purpose of reading, Process of reading, Rules for faster comprehension, Approach to reading, SQ3R, Comprehension (Unseen passage) .

#### **UNIT III**

Writing skills: Report writings – Meaning and Introduction, Characteristics, Types, Business letters: Quotations and Tenders, Notice, Memorandum, Job Application Letter, Resume Writing, E-mail writing, Paragraph writing.

#### **UNIT IV**

Technical Communication: Nature, Origin and Development, Salient features, Scope & Significance, Forms of Technical Communication, Difference between Technical Communication & General Communication , Negotiation – Definition, Process, Types, Stages.

#### **Practical syllabus**

- a) Group Discussion
- b) Just a minutes session: Speaking Extempore for one minutes on given topics
- c) Reading aloud of newspaper headlines and important articles.
- d) Improving pronunciation through tongue twisters.
- e) Mannerism or Etiquette.
- f) Mock Interview

#### **Reference Books:**

1. Wren & Martin, High School English Grammar & Composition – S. Chand & Co. Delhi.
2. Raman Meenakshi & Sharma Sangeeta, Technical Communication-Principles & Practice – O.U.P. New Delhi. 2007.

3. Mitra Barum K., Effective Technical Communication – O.U.P. New Delhi. 2006.
4. Better Your English- A Workbook for 1st year Students- Macmillan India, New Delhi.
5. Horn A.S., Guide to Patterns & Usage in English – O.U.P. New Delhi.

-----

### **Pharmacy (102)**

Definitions of the terms: Pharmacology, Pharmacy, Chemotherapy, Therapeutics, Toxicology, Phonology and motrology etc.

Sources and nature of drugs, Routing, Pharma processes, various dosage form with suitable examples principles of compounding and dispensing of drug preparations different methods for the administration of drugs, pharmacy weights and measures Apothecary's and metric system, household measures.

Prescription reading- parts of prescription and commonly used Latin abbreviations in prescription writing.

Broad therapeutic classification of drugs employed in Veterinary Practice- Definitions, examples and therapeutic uses in animals.

#### **PRACTICALS**

Identification of common drugs labelling and storage of common drugs. Compounding and dispensing of pharmacy preparations.

-----

### **Structure and Function of Body (103)**

Identification of organs of different systems of domestic animals through charts, models and other audio-visual aids. Elementary knowledge regarding physiological functions of various organs

-----

#### **Live Stock and Poultry Production Management (104)**

Important definitions related to animal management care of animals (Cattle, Sheep's, goat and swine) during and after parturition, housing of animals. Routine management practices life grooming, washing , dipping, casting, sherring and exercising; Raising and feeding of farm animals.

Signs of health in different animals; care of sick animals, milking management. Control of vices of animals; introduction to feeding and Management of horses and camels.

Importance of poultry farming, elementary knowledge of incubation and hatchery management; management of chicks, growers and layers; poultry housing and feeding; vaccination against poultry diseases.

#### **PRACTICAL**

External body parts of different animals. Methods of approaching and handling animals; milking farm animals. Methods of ageing; growing; identification, casting and restraining

of farm animals Feeding of dairy animals; methods of recording temperature; pulse, respiration, debudding and drenching of animals. Record keeping.  
Routine farm operations like incubation and hatching, fumigation, candling, wingbanding, legbanding, brooding of chicks. Litter Management, feed mixing, vaccination, debeaking and record keeping.

-----  
**Practical (105)**

\*\*\*\*\*

**1<sup>st</sup> YEAR**

**2<sup>nd</sup> Semester**

**Basics of Computer Science (201)**

**UNIT-I**

Introduction to Computers: Definition of Computer; Components of Computer; Characteristics of Computers; History evolution of Computers; Generation of computers; Classification of Computers- According to Purpose, According to Technology, According to Size and Storage Capacity; Human being VS Computer; Difference between Computer and Calculator.

**UNIT-II**

Input Devices: Mouse, Keyboard, Light pen, Track Ball, Joystick, MICR, Optical Mark reader and Optical Character reader. Scanners, Voice system, Web, Camera. Output Devices: Hard Copy Output Devices; Line Printers, Character Printers, Chain Printers, Dot-matrix Printers, Daisy Wheel Printer, Laser Printers, Ink jet Printers, Plotters, Soft Copy device-Monitor, Sound card and speakers. Memory and Mass Storage Devices; Characteristics of Memory Systems; Memory Hierarchy; Types of Primary Memory; RAM and ROM; Secondary and Back-up; Magnetic Disks, Characteristics and classification of Magnetic Disk, Optical Disk, Magnetic Tape.

**UNIT-III**

Documentation Using MS-Word -Introduction to Office Automation, Creating & Editing Document, Formatting Document, Auto -text, Autocorrect, Spelling and Grammar Tool, Document Dictionary, Page Formatting, Bookmark, Advance Features of MS-Word-MailMerge, Macros, Tables, File Management, Printing, Styles, linking and embedding object, Template.

**UNIT IV**

Electronic Spread Sheet using MS-Excel -Introduction to MS-Excel, Creating & Editing Worksheet, Formatting and Essential Operations, Formulas and Functions, Charts, Advance features of MS-Excel-Pivot table & Pivot Chart, Linking and Consolidation.

**UNIT V**

Presentation using MS-PowerPoint: Presentations, Creating, Manipulating & Enhancing Slides, Organizational Charts, Excel Charts, Word Art, Layering art Objects, Animations and Sounds, Inserting Animated Pictures or Accessing through Object, Inserting Recorded Sound Effect or In- Built Sound Effect.

### **TEXT BOOKS**

1. Sinha, P.K. & Sinha, Priti, Computer Fundamentals, BPB
2. Dromey, R.G., How to Solve it By Computer, PHI

### **REFERENCE BOOKS**

1. Balagurusamy E, Computing Fundamentals and C Programming, Tata McGraw Hill.
2. Norton, Peter, Introduction to Computer, McGraw-Hill
3. Leon, Alexis & Leon, Mathews, Introduction to Computers, Leon Tech World
4. Rajaraman, V., Fundamentals of Computers, PHI
5. Ram, B., Computer Fundamentals, Architecture & Organization, New Age International (P) Ltd.

---

## **Animal Breeding (202)**

### **THEORY**

- General terms used in animal breeding
- Important breeds of livestock (cattle, buffalo, sheep, goat and swine) and poultry, their origin, distribution and breed characteristics.
- Economic utility characters of different species of livestock and poultry.
- Importance of livestock record keeping and various types of records.
- Elementary knowledge of breeding systems

### **PRACTICAL**

- Identification of various breeds of livestock and poultry.
- As cording of breeding date.

---

## **Animal Nutrition (203)**

Elementary description of nutrients and their requirements for maintenance, growth reproduction, lactation, egg production, wool production and work, General principles of feeding and common principle for different categories of introduction to reproduction artificial insemination and storage of semen production of common fodder crops including and knowledge about common ...

Preparation, preservation and storage of hay and silage.  
Common feed and fodder their classification, identification.

## **PRACTICALS**

Elementary knowledge of computation of ration for different types of livestock and poultry. silage and hay making.

-----

## **Elementary Medicine (204)**

Preliminary knowledge about signs of disease, clinical methods of examination and detection of abnormalities:

- (1) Abnormal body discharge.
- (2) Body temperature, pulse, respiration
- (3) Methods of injecting drugs, sera, vaccine etc. Use of canola, Passing stomach tube, probang heat symbol and other instruments for treatment.
- (4) General agents responsible for causing disease bacteria, Viruses, Fungi and Parasites.
- (5) General principles of prevention and control of disease.
- (6) Utilization and disposal of carcasses.
- (7) Elementary clinical diagnostic methods, history & general examination.
- (8) Non – infectious diseases-symptoms and first aid of follow diseases:  
Stomatitis, choke, upper resp. tract infections, tympany, impaction, constipation, diarrhoea and dysentery, indigestion pneumonia, haemoglobinuria, milk fever, ketosis, pica in camels, retention of urine.

### **Infectious diseases:**

Symptoms and first aid in the following disease.

#### **1. Bacterial & Viral**

- I. Johnne's diseases, mastitis, haemorrhagic Septicemia
- II. Anthrax, Black quarter, tetanus, enterotoxemia
- III. Rinderpest, F.M.D. Rabies, Swine fever.

#### **2. Parasitic diseases**

Sabesiosis, Theileriosis, Trypanosomiasis, Coccidiosis, Ascariasis, control of Flies, Lice, ticks and mites and mange.

#### **3. Poultry diseases**

Ranikhet diseases, fowl pox, salmonellosis

#### **4. Common camel diseases.**

## **PRACTICALS**

Cleaning of slides, glasswares and other laboratory equipments, techniques of staining and preparation of blood smears, care and use of microscopes, collection, processing for examination of blood, urine, faeces, collection, preservation, fixation and dispatch of morbid material for laboratories examination.

-----

### **Practical (205)**

\*\*\*\*\*

### **2<sup>nd</sup> YEAR**

### **3<sup>rd</sup> Semester**

### **Surgery (301)**

#### **THEORY**

- (I) Introduction and common terms used in Surgery.
- (II) Sterilization in surgical practice
- (III) Introduction to superficial surgical ailments (Abscess, fistula, sinus, wounds, gangrene, cyst)
- (IV) Introduction to dental care.
- (V) Introduction to hoof management.
- (VI) First aid management of fracture, blood, hemorrhage.
- (VII) Introduction to post operative management
- (VIII) Application and uses of various antiseptics lotions ointments and tinctures in surgical practice.

#### **PRACTICAL**

- (I) Preparation of pack for auto calving
- (II) Surgical attires and their uses by the Surgeon
- (III) Operation room discipline
- (IV) Dressing of wounds and bandages
- (V) Identification of various surgical instruments
- (VI) Physical restraint or animals for surgery
- (VII) Various injections
- (VIII) Burdize castration

(IX) Preparing animal for surgery

(X) Application of counter irritants, heat, cold fermentation

-----  
**Gynecology (302)**

**PAPER – III GYNECOLOGY (REPRODUCTIVE DISORDERS)**

Introduction to reproductive patterns of livestock

Genital organs of male and female Transportation of materials from abortions. Assistance in holding obstetrical cases

Preparation of packs for obstetrical operations sterilization of instruments, preparation of animals, untrauterive medication. Assistance to parturient animals Care of new born. Nomenclature gynecological and obstetrical conditions

**PRACTICALS**

Intrauterine medication, use of Vagino scope, Preparation of packs for obstetrical cases, Preparation of different stains for semen evaluation and cytology. Assistance in obstetrical cases.

-----  
**Clinical Practice (303)**

Recording of temp., pulse and respiration.... drug administration, practice of compounding and dispensing various drugs, use of trocar & canula, stomach tube, probang : intreammammary infusions, dressing of wounds, preparation of commonly used of ointments, tinctures, lotions/solutions etc. acquaintance with various gynaecological and surgical instruments with their uses, sterilization of instruments etc. demonstration of gynecological and surgical problems preparation and handling of surgical pack, introduction to X-ray procedure, collection of clinical material for laboratory examination, Burdizzo castration of calf, sheep and goat.

-----  
**Practical (304)**

\*\*\*\*\*

**2<sup>nd</sup> YEAR**

**4<sup>th</sup> Semester**

**Reproduction Artificial Insemination and Storage of Semen (401)**

Structure and function of reproductive organs of cow, horse, dog, pig and poultry. Estruscycles of domestic animals.

Signs of heat in domestic animals on periods of domestic animals. Samprames gestation of partarition in cattle, buffaloes, sheep, goat and pigs. Advantages and limitation of the technique of Artificial insemination.

**PRACTICAL**



- (1) Rectal palpation of reproductive organs.
- (2) Training of bulls.
- (3) Preparation of Artificial vagina for semen collection
- (4) Semen collection and evaluation.
- (5) Preparation of diluters and extension of semen.
- (6) Demonstration of semen freezing techniques.
- (7) Artificial insemination technique with liquid/frozen semen
- (8) Sterilization off glassware /laboratory were used in A.I. work

-----

### **Animal Products Technology (402)**

Handling, storage and distribution of meat, poultry and eggs.

Milk definition and its composition. Factors affecting composition and quality of milk. Elementary knowledge about nutritive value, sources of bacterial contamination of milk and clean milk production; milk collection, legal standards of milk; processing, packaging and distribution of milk.

#### **PRACTICAL**

Candlinge and grading of eggs. Samples, C.C.B. and alcohol tests, ph by indicator paper, specific gravity test, estimation of fat, S.N.F and T.S in milk, determination of adulterants and preservations.

-----

### **Hospital Training (403)**

\*\*\*\*\*