Republic of Iraq
Ministry of Higher Education
and Scientific Research
University of Mosul
College of Veterinary Medicine

Syllabuses of Undergraduate Students

Iraqi Veterinary Medicine Colleges

Academic Year 2020-2021

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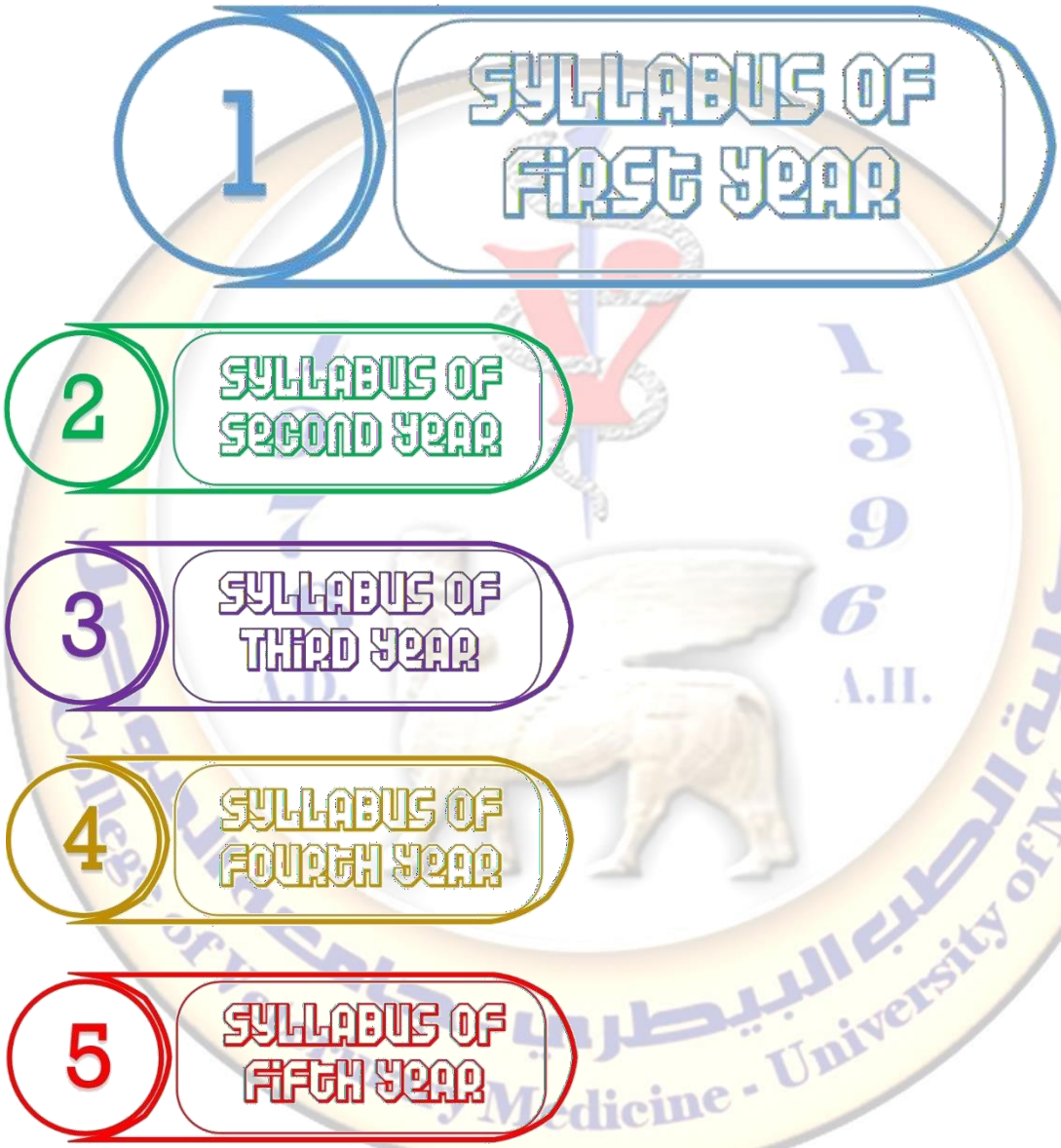
1
SYLLABUS OF FIRST YEAR
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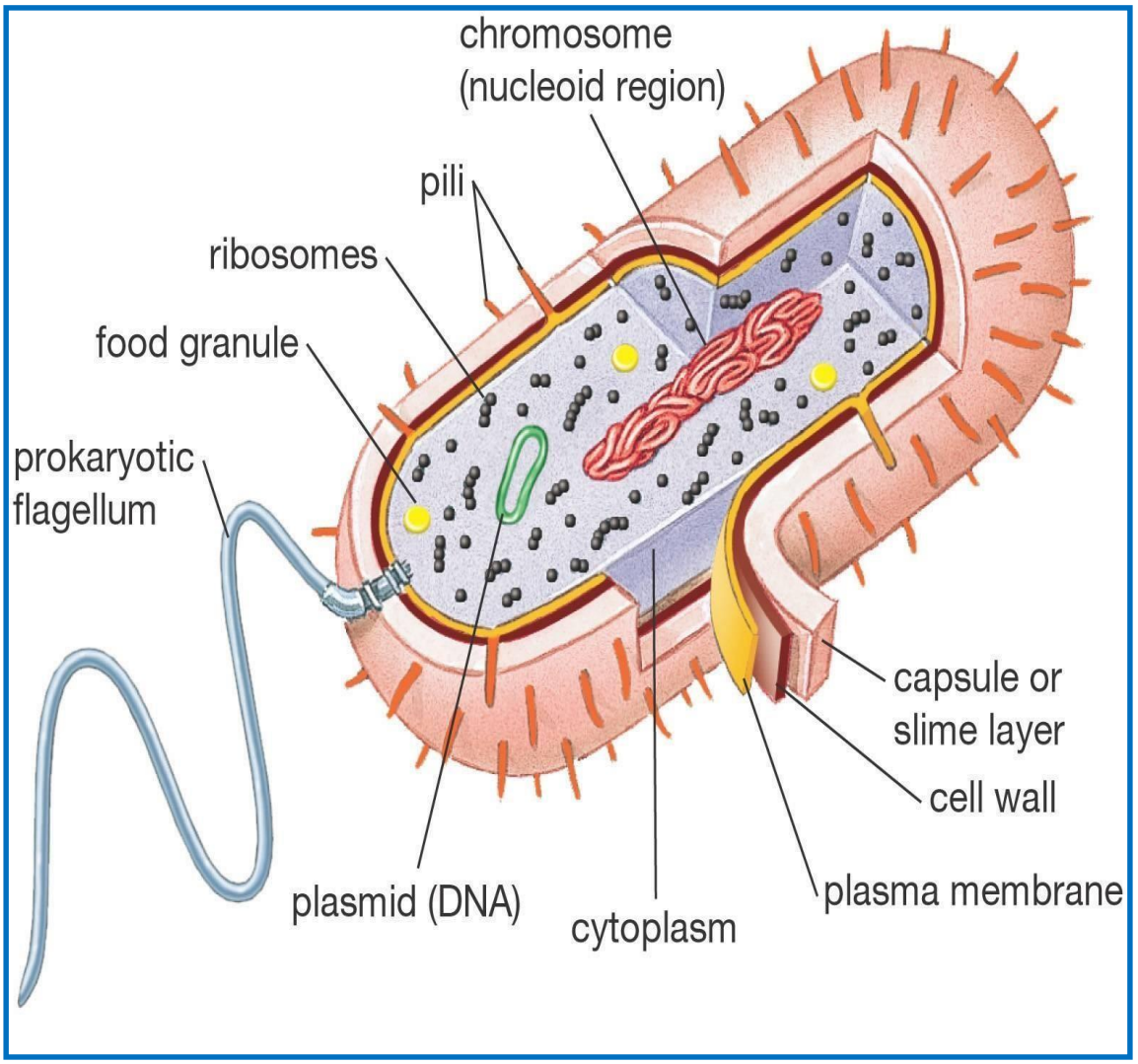
Subject: BIOLOGY / PART 1

FIRST Year	FIRST Semester



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

BIOLOGY part1/TheoreticalSubjects

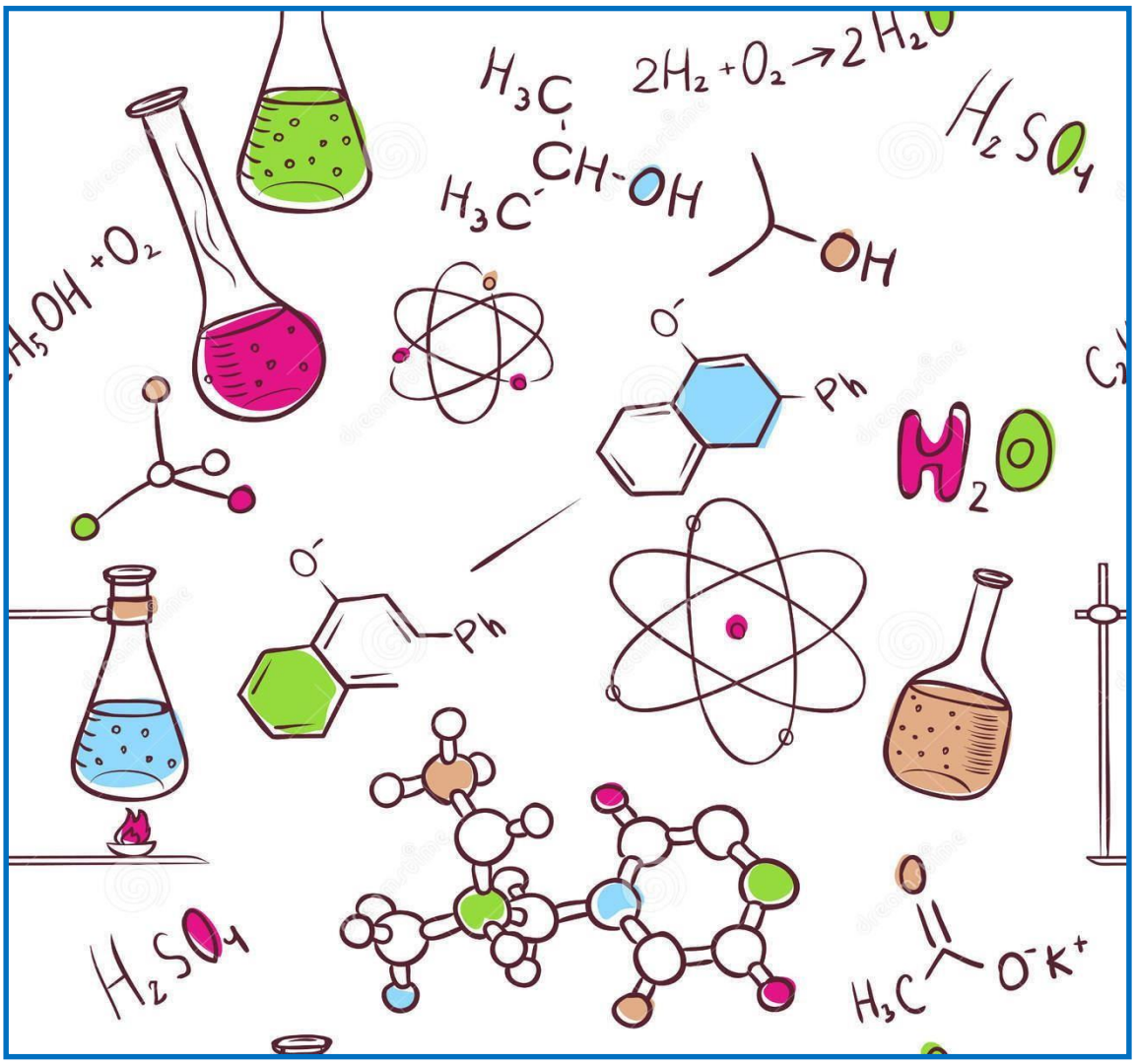
THEORETICALSubject	Hours
Introductionanddefinitionsofterms	2
Origin oflife	2
Thecell	2
TaxonomyofKingdoms	2
Phylum:Protozoa	4
Phylum:Platyhelminthes	4
Phylum:Nemathelminths	4
Phylum:Arthropoda	2
Phylum:Chordata	8
Total	**30**

BIOLOGYpart1/PracticalSubjects

PRACTICAL Subject	Hours
The Microscope	*2*
The Cell	*2*
Protozoa / Mastigophora	*4*
Protozoa / Sarcodena	*2*
Protozoa / Ciliphora	*2*
Protozoa / Sporozoa	*2*
Nematoda / Ascaris	*2*
Nematoda / Ancylostoma	*2*
Trematoda / Fasciola	*2*
Trematoda / Schistosoma	*2*
Cestoda / Taenia	*2*
Mosquitoes	*2*
Phylum: Chordata (dissecting)	**4**
Total	**30**

Subject: GENERAL CHEMISTRY / PART 1

FIRST Year	FIRST Semester



SUBJECT CREDITS

Theoretical	**2** Hours	**2** Units
Practical	**2** Hours	**1** Units
TOTAL	**4** Hours	**3** Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

GENERALCHEMISTRY part1/TheoreticalSubjects

THEORETICALSubject	Hours
Atomsandelectronicstructure: Atomsandmassnumber,isotopes,quantumnumbersandatomicorbitals,electronicconfiguration,periodictable, ionization energy, atomic radii, electronegativity, electron affinity.	*4*
Typesofchemicalbonds: Covalent,Coordinatecovalentbonds,hydrogen bonding,hybridizationtheory (sp-,sp2-,sp3-hybridization),atomicformulaandmolecularmass.	*4*
Acidbasetheory: Definitionofacidsandbases,dissociationconstant, pHvalueindifferentsolutions(strongacidsorstrongbases,weakacidandweakbases).	*3*
Volumetric analysis: Titration of acids and bases, definition of titration,indicator, equivalent point, end point, standard solution, normal solution, molarsolution.Theequivalentweightsinneutralizationreactions,formulaweight, calculation of the normality of concentrated acids, Buffer solutions, biochemicalbuffers.	*4*
Organicchemistry: Functionalgroup,alkanesandcycloalkanes(nomenclature; synthesisandreactions).Alkenes (nomenclature, synthesisand reactions)	*3*
Alkynesandaromaticcompounds: Synthesis,reactionand chemicaltest ofalkynes.Benzene(nomenclatureandelectrophilicsubstitution),reactionofthesidechain of alkyl.	*3*
Organichalides,ethers,alcoholandphenols: Nomenclature,synthesisand reactions	*3*
AldehydesandKetones: Nomenclature,synthesisandreaction,chemical testofaldehydesandaldehydesorketoneswithCh3-group.	*2*
Carboxylic acids and carboxylic acid derivatives: Nomenclature,synthesisandreactionofcarboxylicacids	*2*
Anhydrides,estersandamides: Nomenclature,synthesisandreaction.Amines, Nomenclature, synthesis and reaction.	*2*

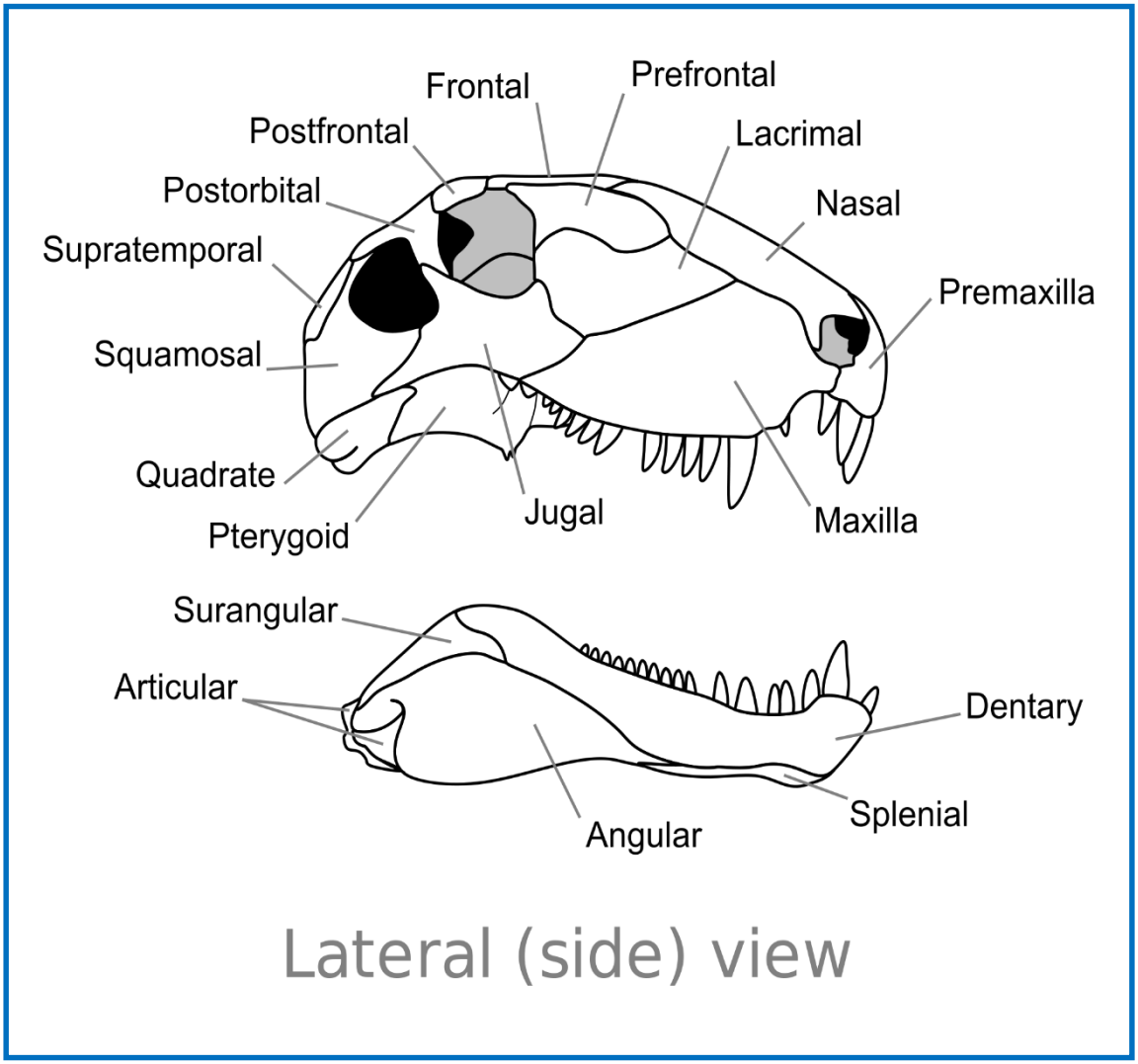
GENERAL CHEMISTRY part1/PracticalSubjects

PRACTICAL Subject	Hours
Qualitative analysis of cations	**4**
Analysis of group (1) Ions. (Ag, Hg, pb).	**4**
Analysis of mixture of group (1) ions	**4**
Analysis of group (2) ions. (Cu, Cd, Bi, Hg).	**4**
Analysis of mixture of group (2) ions	**4**
Analysis of mixture of group (1) and group (2).	**4**
Titration, practice on titration with water.	**3**
Preparation of standard Na_2CO_3 solution	**3**

Total	**30**

Subject: ANATOMY / PART 1

FIRST Year	FIRST Semester



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**3**	Hours	**2**	Units
TOTAL	**5**	Hours	**4**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**20**	**30**
Practical	**20**	**30**
TOTAL	**40**	**60**

ANATOMYpart1/Theoretical Subjects

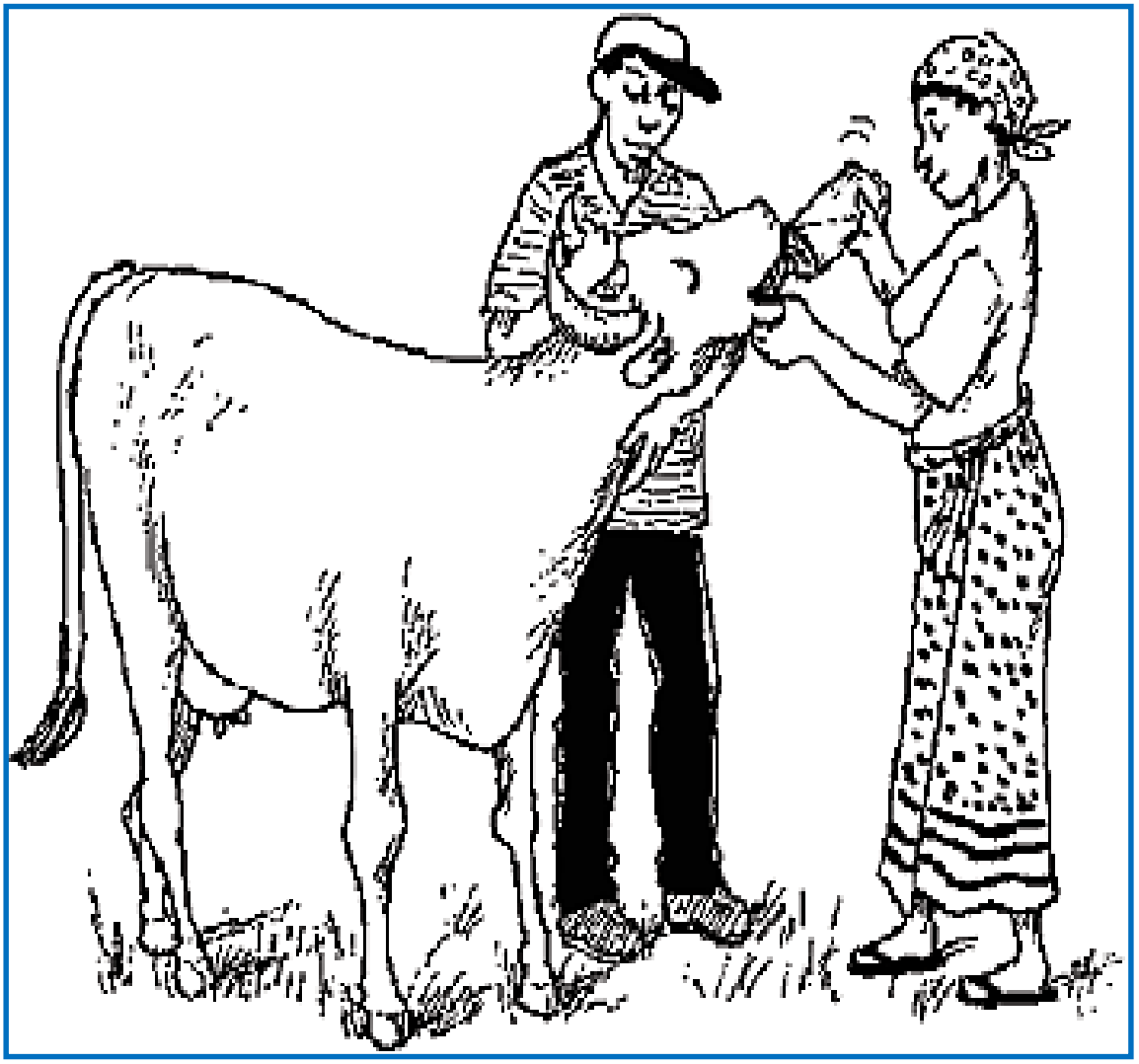
THEORETICALSubject	Hours
Introductiontoanatomy	2
Generalosteology	6
Myology	6
Generalsyndesmology(arthrology)	6
Endocrineglands	4
Senseorgans	6
Total	**30**

ANATOMYpart1/PracticalSubjects

PRACTICAL Subject	Hours
Bones of thoracic limb, joints, scapula of horse	3
Humerus and comparative anatomy	3
Radius and ulna with comparison	3
Carpal bones in horse and metacarpal and phalanges bones	3
Muscles of the shoulder griddle of the sheep	3
The lateral surface of shoulder muscles and arm in sheep	3
The medial surface of shoulder muscles and arm in sheep	3
Muscles of the forearm and manus (extensors and flexors)	3
Review	3
Practical examination	3
Arteries and nerves of the thoracic limb in sheep	3
Thoracic, lumbar vertebrae and sacrum in horse	3
Ribs and sterium in horse	3
The hoof in horse and claw of the ox	3
Urinary system (kidneys, ureter and urinary bladder)	3
Total	**45**

Subject: ANIMAL MANAGEMENT / PART 1

FIRST Year	FIRST Semester



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

ANIMALMANAGEMENTpart1/Theoretical Subjects

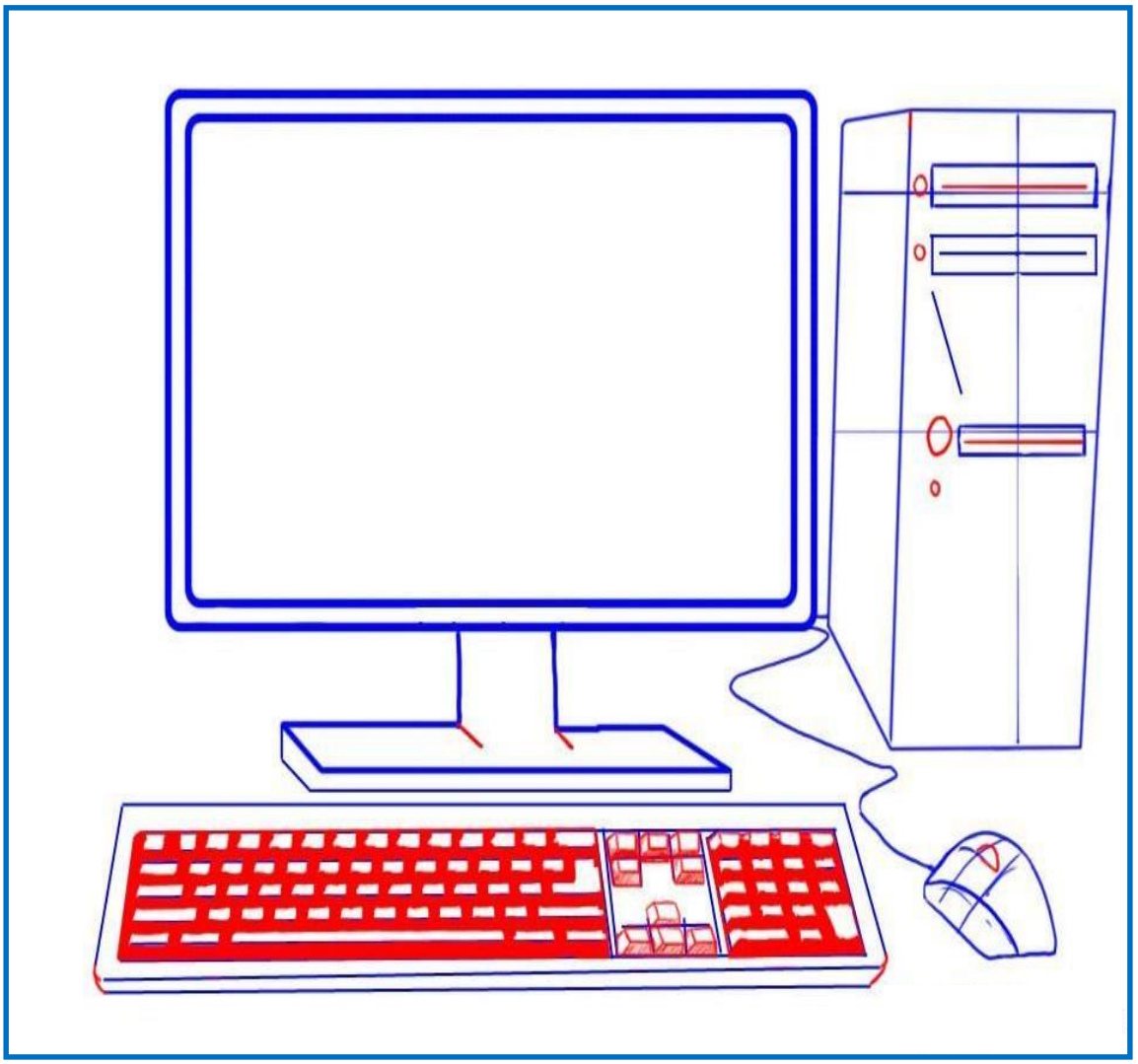
THEORETICALSubject	Hours
Introductiontoanimalwelfare	2
Animalwealthanditsimportance	4
Horses	8
Cattle	8
SheepandGoats	8
Total	**30**

ANIMALMANAGEMENTpart1 /PracticalSubjects

PRACTICAL Subject	Hours
External features of farm animals	8
Methods of approaching, restraint and casting of horses	6
Methods of approaching, restraint and casting of cattle, camel	6
Exam	2
Methods of approaching, restraint and casting of sheep	6
Vices of horses	2
Total	**30**

Subject: COMPUTER SCIENCE / PART 1

FIRST Year	FIRST Semester



SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**3**	Hours	**2**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**20**	**30**
Practical	**20**	**30**
TOTAL	**40**	**60**

COMPUTERSCIENCE part1/TheoreticalSubjects

THEORETICAL Subject	Hours
Introduction to digital world and computer system (generations)	5
Data representation in computer's memory	5
Numerical systems	7
Introduction to Windows	8
Definition of (task bar, start menu, icons)	5
Total	**30**

COMPUTERSCIENCEpart1/PracticalSubjects

PRACTICAL Subject	Hours
Using computer	10
Practicing with GWBASIC instructions	10
Practicing with windows	10
Total	**30**

Subject:DEMOCRACY

FIRST Year	FIRST Semester

SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**-**		**-**	
TOTAL	**2**	Hours	**2**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

DEMOCRACY/Theoretical Subjects

THEORETICAL Subject	Hours
Democracy	5
Definition of democracy	5
Types of democracy	5
Classification of democracy	5
Evaluation of democracy	10
Total	**30**

Subject:BIORISKMANAGEMENT

FIRST Year	FIRST Semester

SUBJECT CREDITS

Theoretical	**1** Hours	**1** Units
Practical	**-**	**-**
TOTAL	**1** Hours	**1** Units

MARK DETAILS

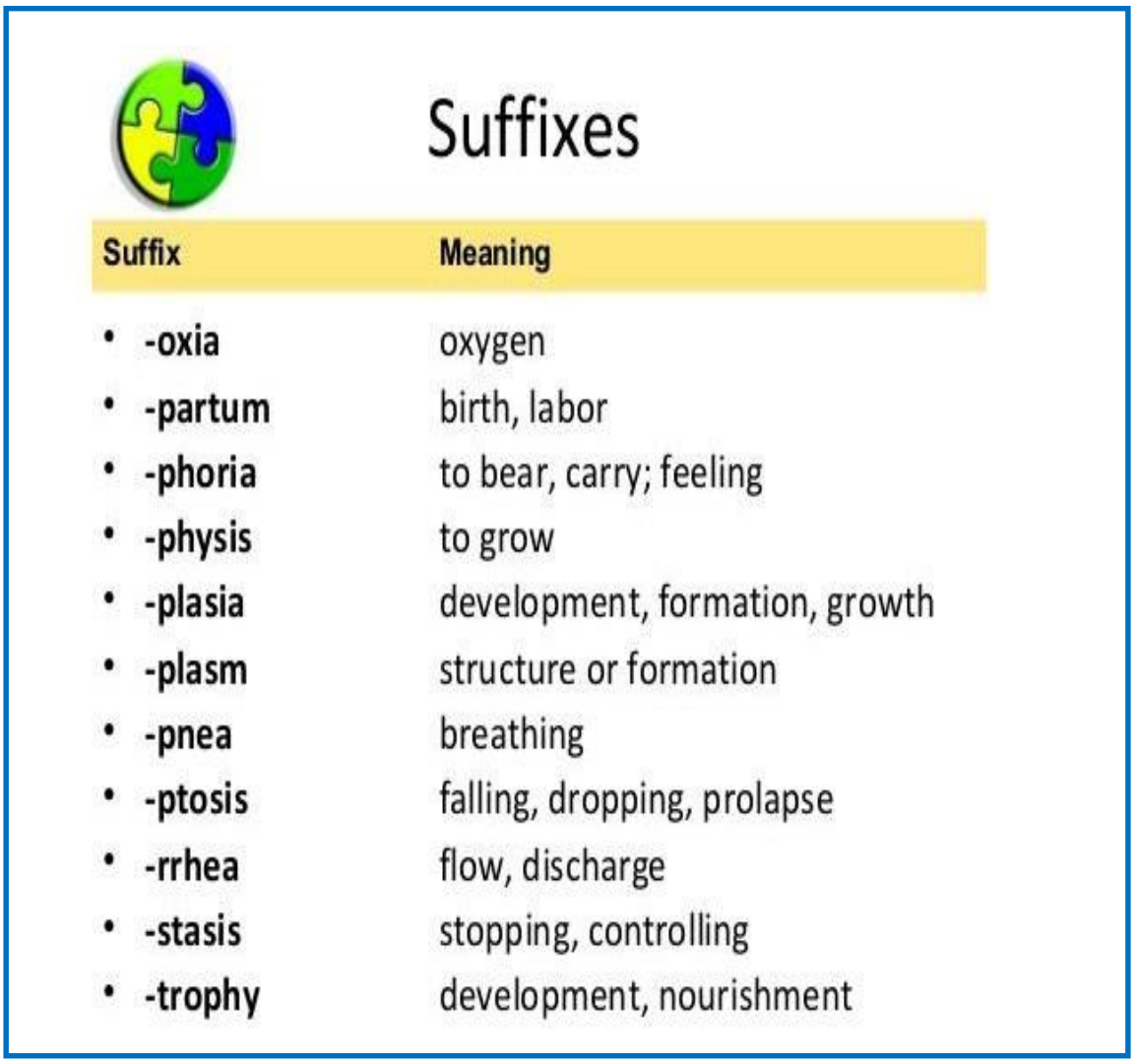
	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

BIORISKMANAGEMENT/TheoreticalSubjects

THEORETICALSubject	Hours
Introduction : Definitions& Concepts Risk,Hazard,Biorisk,Biosafety,andBiosecurity.	1
BiologicalMaterials(Bacteria,Viruses,Fungi,Parasites, Prions,Zoonoticpathogens,Toxins).	1
Personalprotectiveequipment(PPE). TypesofPPE,Routeofexposuretopathogens.	1
Laboratorysafetysymbols andhazard signs.	1
RisksgroupsandBiosafetyLevels.	1
Biosafety cabinet classes: Design, Operation,use and misuse.	1
StandardMicrobiologyTechniquesandSafety.	1
Safeuseof(pipettes,centrifuge,homogenizers,shakers,blenders,and sonicators, ampoulescontaining infectiousmaterials).	1
Collection, handlingandtransportofdiagnosticspecimens.	1
Decontaminationandwastedisposal.	1
Workingwithpotentiallyinfectedanimals.Generalconsiderations.	1
Hazardous chemicals (Routes of exposure, storage of chemicals,general rules regardingchemical incompatibilities, Toxic effectsof chemicals, Explosive chemicals, Chemical spills, Compressedand liquefied gases).	2
PreparednessandresponsetoChemical,Biologicalaccidents: - IntheLaboratories. - Inthe field.	1
FirstaidandemergencyresponseintheLaboratories.	1
Total	**15**

Subject: VETERINARY MEDICAL TERMINOLOGY

FIRST Year	FIRST Semester



SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical	**-**		**-**	
TOTAL	**1**	Hours	**1**	Units

MARK DETAILS

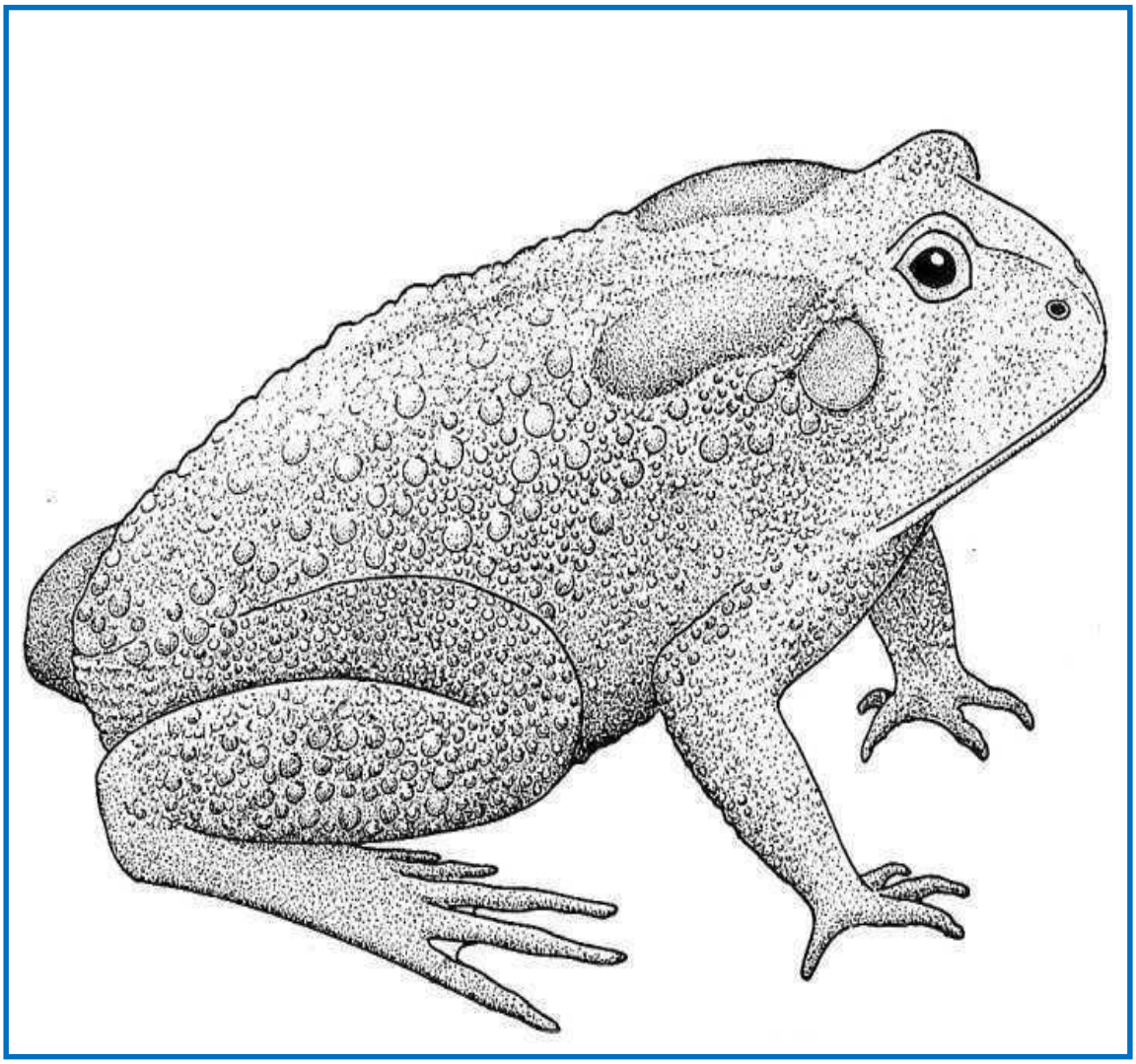
	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

VETERINARYMEDICALTERMINOLOGY/TheoreticalSubjects

THEORETICALSubject	Hours
IntroductiontotheVeterinaryMedicineField.	1
Basicsofmedical terms areformed (prefix,root,suffix).	2
Spellingandpronouncingmedicalterms.	1
Definetermsthatareusedtodescribeanimalanatomy.	1
MeetingandExaminingtheanimal,takingacasehistory.	2
UnderstandingImmunityandparasitologyterms.	1
DefiningPharmacologyBasicMeasurementandConversionDosing LabelingandAdministeringMedication.	1
Termsusedinveterinarydialogueinregardstopositioningofanimals andrelationshipsbetweenbodyparts.	2
Bodypartsofbeefanddairycattle,andsheepusingveterinarymedical terminology.	1
Termsusedtodescribeanimals sex,groups,parturition.	1
Terms associated with disease of the various body systems, pharmacology,surgery,andlaboratoryprocedures.	2
Total	**15**

Subject:BIOLOGY/PART2

FIRST Year	SECOND Semester



SUBJECT CREDITS

Theoretical	**2** Hours	**2** Units
Practical	**2** Hours	**1** Units
TOTAL	**4** Hours	**3** Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

BIOLOGY part2/TheoreticalSubjects

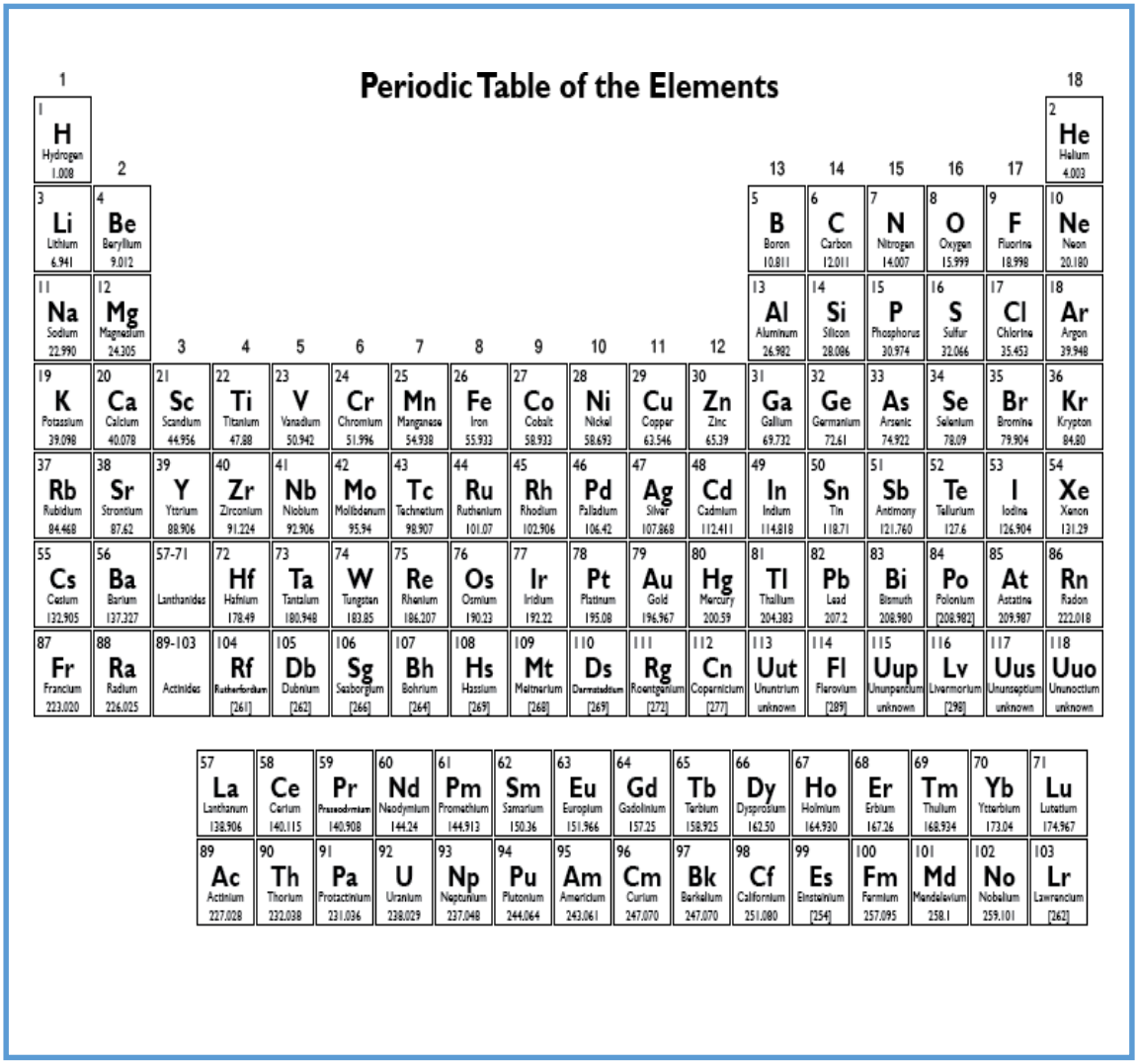
THEORETICALSubject	Hours
Livingorganisms	2
ComparisonbetweenProkaryotic&Eukaryoticcells	2
Mitosis:ReplicationofEukaryoticcells	2
Meiosis:ReductiondivisionandGametogenesis	2
Typesoflivingtissues	2
Stemcells	2
Bloodcomposition&Functions	4
General characters ofBacteria	2
Generalcharacters ofViruses	2
IntroductiontoMolecularBiology	2
NucleicacidTypes&Functions	4
Genes&Chromosomes	2
GeneticEngineering	2
Total	**30**

BIOLOGYpart2/PracticalSubjects

PRACTICAL Subject	Hours
Prokaryotic & Eukaryotic cells	2
Mitosis	2
Bacterial staining	4
Types of tissues	8
Blood film	4
How to use laboratory equipment's (Balance, Water bath, PH meter, Centrifuge, incubator, etc..)	10
Total	**30**

Subject:GENERALCHEMISTRY/PART2

FIRST Year	SECOND Semester



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

GENERALCHEMISTRY part2/TheoreticalSubjects

THEORETICALSubject	Hours
Biochemistry: Introduction,water(Physical and chemicalproperties). Carbohydrates: Mono-, di-, oligo- and polysaccharides, classification,cyclizationand reactions of monosaccharide's.	**4**
1. **Disaccharides**(Maltose,cellobiose,lactose,sucrose). 2. **Polysaccharides**(cellulose,starch,glycogenandchitin). 3. **Lipids,Fatsandoils:**Selectedfattyacidsandtheirsource, triglycerides.	**8**
Aminoacids: Thenameandstructuresofaminoacids,essentialaminoacids,synthesi sand identification ofamino acids.	**6**
Peptides: Structures,synthesisandbiosynthesisofpeptides.Proteins:Structureandc lassification ofproteins, high structureof proteins.	**6**
Nucleicacids:DNA(deoxyribonucleicacids),RNA(ribonucleicacids).The structureofDNA,RNA	**6**
Total	**30**

GENERAL CHEMISTRY part2/PracticalSubjects

PRACTICAL Subject	Hours
Standardization of HCl with standard solution of Na_2CO_3	**4**
Analysis of mixture of $NaHCO_3$ and Na_2CO_3	**4**
Iodometric titration: Standardization of $Na_2S_2O_3$ and determination of Cu in $CuSo_4$ solution.	**4**
Self-indicator titration: Standardization of $KMnO_4$ solution, determination of Fe in $FeSO_4$ solution.	**4**
Precipitation titration: Determination of chloride by Maher	**4**
Determination of the strength volume of H_2O_2 solution.	**4**
Crystallization	**3**
Determination of melting point.	**3**
Total	**30**

Subject: ANATOMY / PART 2

FIRST Year	SECOND Semester

SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**3**	Hours	**2**	Units
TOTAL	**5**	Hours	**4**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**20**	**30**
Practical	**20**	**30**
TOTAL	**40**	**60**

ANATOMYpart2/Theoretical Subjects

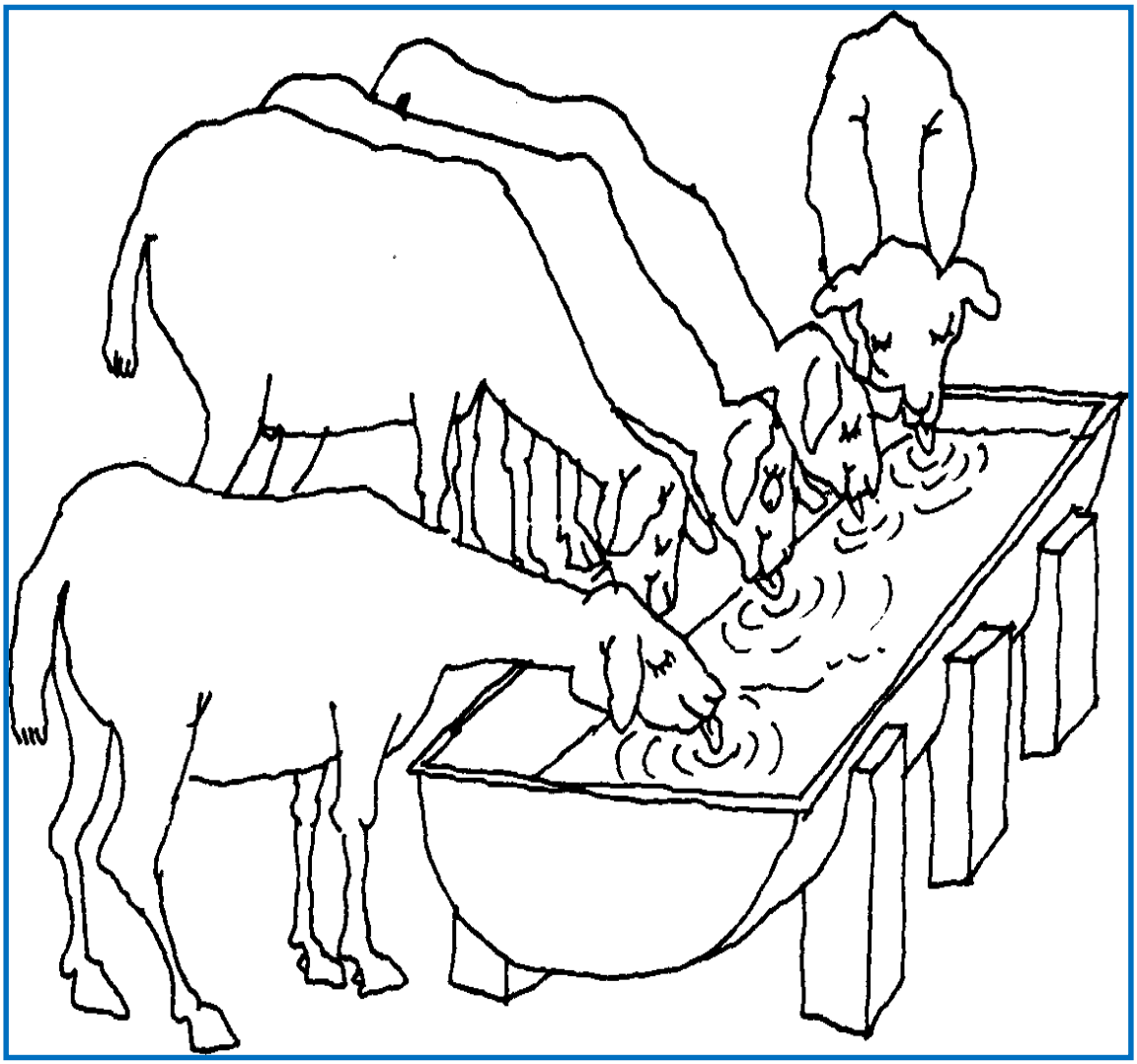
THEORETICALSubject	Hours
CommonIntegument	5
UrinarySystem	6
MaleGenitalSystem	8
FemaleGenitalSystem	7
MammaryGland	4
Total	**30**

ANATOMYpart2/PracticalSubjects

PRACTICAL Subject	Hours
Comparative anatomy of the pelvic bone	3
Comparative anatomy of the femur	3
Comparative anatomy of the tibia and fibula	3
Tarsus and metatarsal bone in horse	3
Muscles of the sublumber, hip and in sheep	3
Muscles of the thigh in sheep	3
Flexor and extensor muscles of the pelvic limb in sheep	3
Review	3
Practical examination	3
Arteries and sacrolumbar plexuses and nerves of pelvic limb	3
Inguinal region and mammary gland in sheep	3
Male reproductive system in sheep (testis and scrotum)	3
Female reproductive system in sheep (ovaries, uterine tube and uterus)	3
The eye (tunics, muscles, nerves, chambers).	3
Review and Exam	3
Total	**45**

Subject: ANIMAL MANAGEMENT / PART 2

FIRST Year	SECOND Semester



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

ANIMALMANAGEMENTpart2/Theoretical Subjects

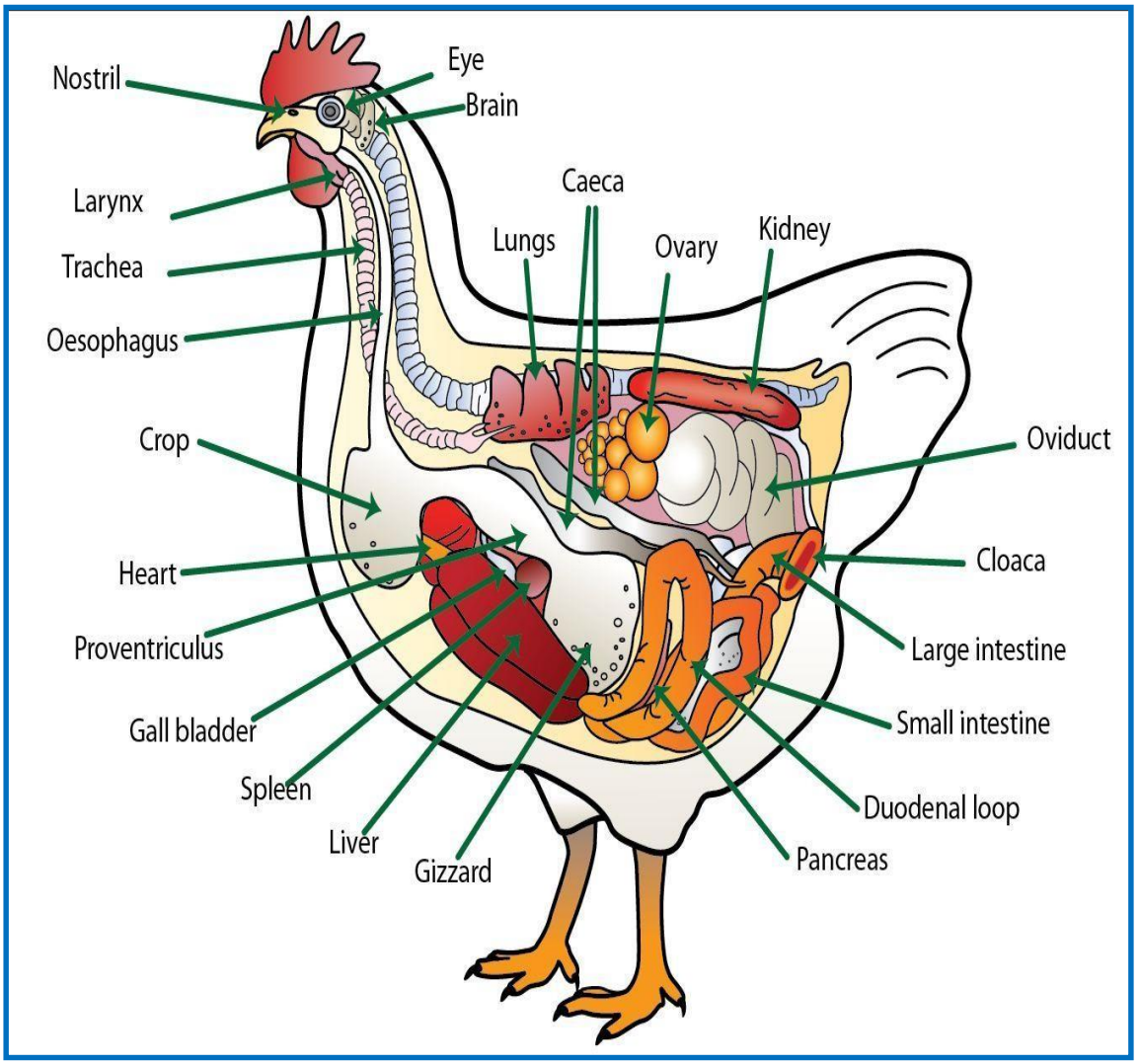
THEORETICALSubject	Hours
Externalfeaturesoffarmanimals	8
Methodsofapproaching,restraintand castingofhorses	6
Methodsofapproaching,restraintandcastingofcattle,camel	6
Exam	2
Methodsofapproaching,restraintandcastingofsheepfor	6
Vicesofhorses	2
Total	**30**

ANIMALMANAGEMENTpart2 /PracticalSubjects

PRACTICAL Subject	Hours
Vices of cows	2
Mouth ages for different animals, signs of health: pulse and	12
Care of farm animals, grooming, washing, heating, clipping, drying	6
Exam	2
Sheep dipping	4
Shoeing of horses	4
Total	**30**

Subject: POULTRY MANAGEMENT

FIRST Year	SECOND Semester



SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**3**	Hours	**2**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**20**	**30**
Practical	**20**	**30**
TOTAL	**40**	**60**

POULTRYMANAGEMENT/ TheoreticalSubjects

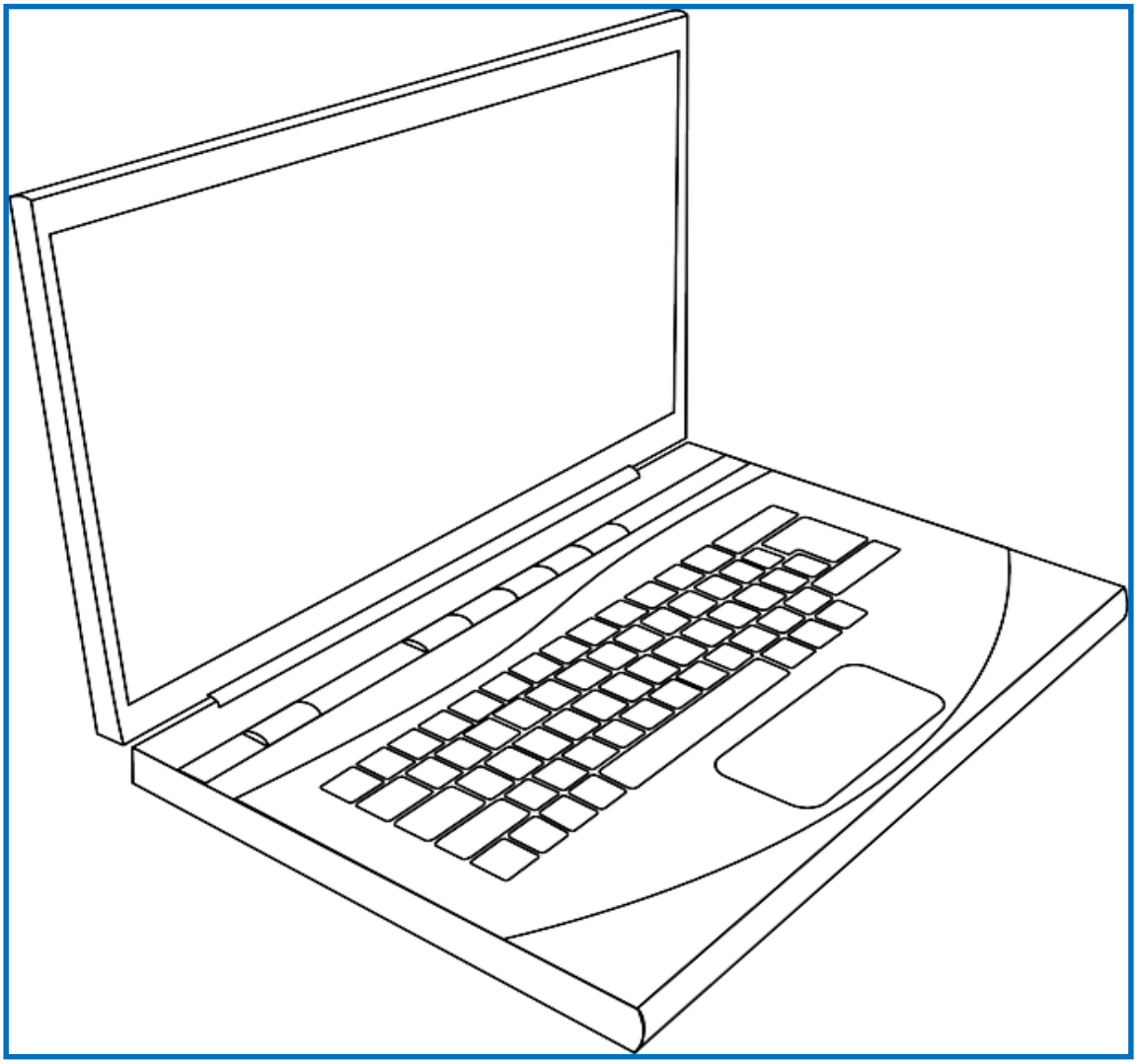
THEORETICALSubject	Hours
Charactersofpoultrymanagement	1
TerminologyandpoultryClassification	2
Biologyofthechickens	2
EggStructureandHygiene	1
ArtificialHatchingandHatcheries	1
1st Exam	1
Broodingandrearingperiod	2
Factorsaffectingeggproduction	1
NutritionandRationsFormation	1
DesignofpoultryHouses	1
VaccinationManagement	1
2nd Exam	1
Total	**15**

POULTRYMANAGEMENT/ PracticalSubjects

PRACTICAL Subject	Hours
Phenotypic and molting	4
Distinguishing of layers' chicken	2
Egg Storage – Disinfection and Fumigation	4
Anatomy of an adult Hen	4
Demonstration of Hatcheries	2
Poultry Equipment	2
Types of poultry diets	2
Calculations of feed components in rations	4
Lighting Systems for poultry breeding	2
Disinfection of Hatcheries and equipment	2
Disinfection of poultry Houses	2
Total	**30**

Subject: COMPUTER SCIENCE / PART 2

FIRST Year	SECOND Semester



SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**3**	Hours	**2**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**20**	**30**
Practical	**20**	**30**
TOTAL	**40**	**60**

COMPUTERSCIENCE part2/TheoreticalSubjects

THEORETICALSubject	Hours
Usingbarsin MS-WORD	10
UsingbarsinMS-POWERPOINT	10
Usingbarsin MS-EXCEL	10
Total	**30**

COMPUTERSCIENCEpart2/PracticalSubjects

PRACTICAL Subject	Hours
Looking at MS-WORD interface	6
Application about menu bar	1
Application about format bar	1
Application about standard bar	1
Application about painting bar	1
Looking at MS-POWERPOINT interface	5
Application about using bars	5
Looking at MS-EXCEL interface	5
Application about using bars	1
Application about menu bar	1
Application about format bar	1
Application about standard bar	1
Application about painting bar	1
Total	**30**

Subject: HUMAN RIGHTS

FIRST Year	SECOND Semester

SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**-**		**-**	
TOTAL	**2**	Hours	**2**	Units

MARK DETAILS

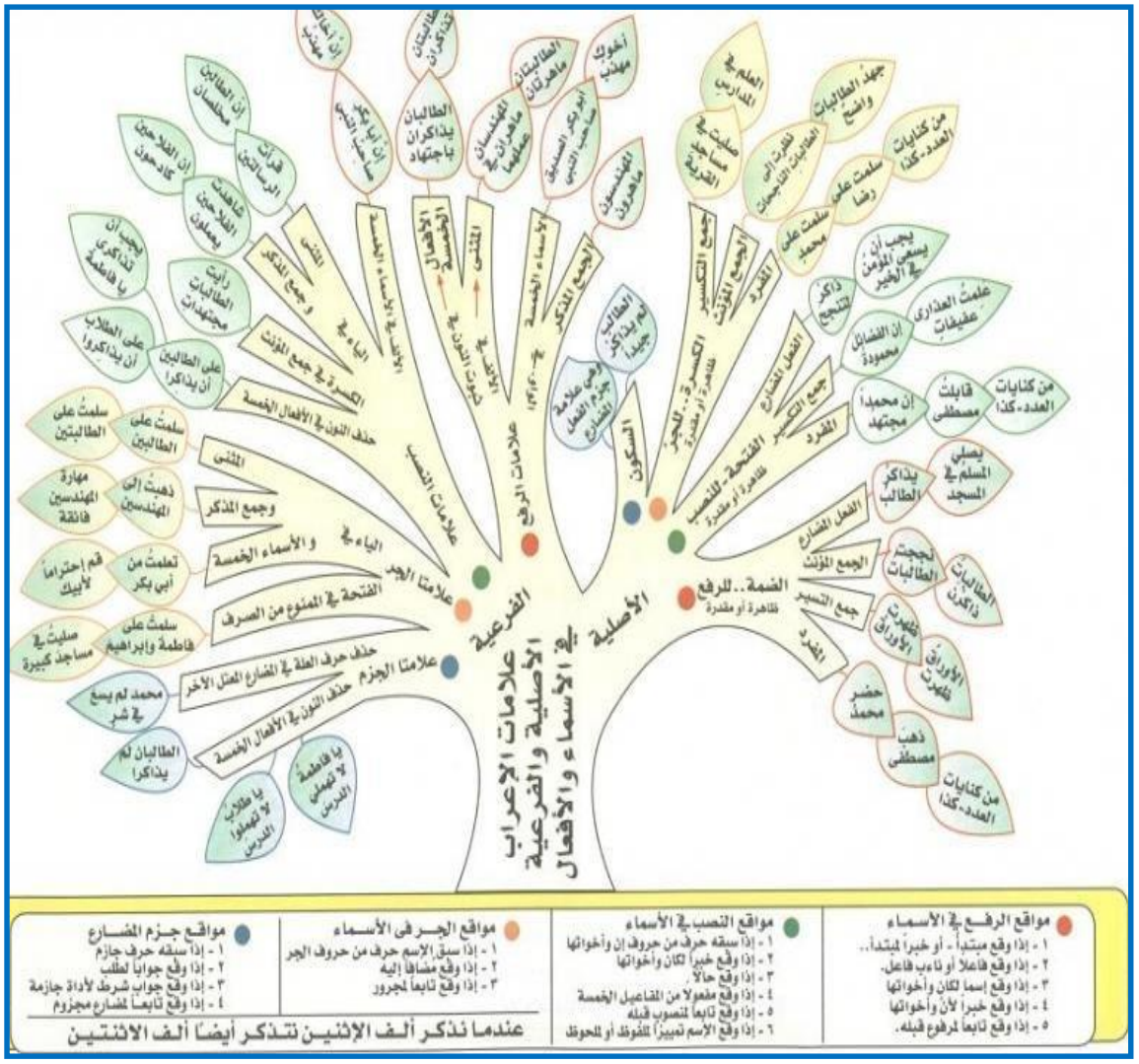
	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

HUMANRIGHTS/TheoreticalSubjects

THEORETICALSubject	Hours
Humanright betweenIslamand laws	5
Historicaldevelopmentofhumanright	5
Humanrightanditstypes	5
Insurancetoprotectionofhumanrights	5
ChildhoodprotectioninIslam	5
ChildhoodprotectioninLaws	5
Total	**30**

Subject: ARABIC LANUAGE

FIRST Year	SECOND Semester



SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical	**-**		**-**	
TOTAL	**1**	Hours	**1**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

اللـغـة الـعـربـيـة/الموضوعات النظرية

الموضوعاتالنظرية	الساعات
نشأةاللغة	1
نشأة اللغةالعربيةوخصائصها	1
معانيحروفالجر	1
االخطاءالشائعةفيالكتابةالعلمية	1
العددتذكيرهوتأنيثه	1
التميزوالحال	1
نشأةالشعرالعربي	1
أثرالقرانالكريمفيالشعر	1
اراءالرسولوالخلفاءالنقديةوموقفاالسالممنالشعر	1
الخطابة	1
دراسةتحليلنماذجخطابيةمنمنهجالبالغة	1
البالغةالعربية	1
علمالمعاني	1
علمالبديع	1
علمالبيان	1
المجموع	15

Curriculum Summary for First Year Subject / First semester

No.	Subjects	Credits	Theoretical	Practical	Total
1	Biology / part 1	Units	2	1	3
		Hours	2	2	4
2	General chemistry / part 1	Units	2	1	3
		Hours	2	2	4
3	Anatomy / part 1	Units	2	2	4
		Hours	2	3	5
4	Animal management / part 1	Units	2	1	3
		Hours	2	2	4
5	Computer Science / part 1	Units	1	1	2
		Hours	1	2	3
6	Democracy	Units	2	-	2
		Hours	2	-	2
7	Biorisk management	Units	1	-	1
		Hours	1	-	1
8	Veterinary medical terminology	Units	1	-	1
		Hours	1	-	1

Total Subjects: 8 **Total Units: 19** **Total Hours: 24**

Curriculum Summary for First Year Subject / Second semester

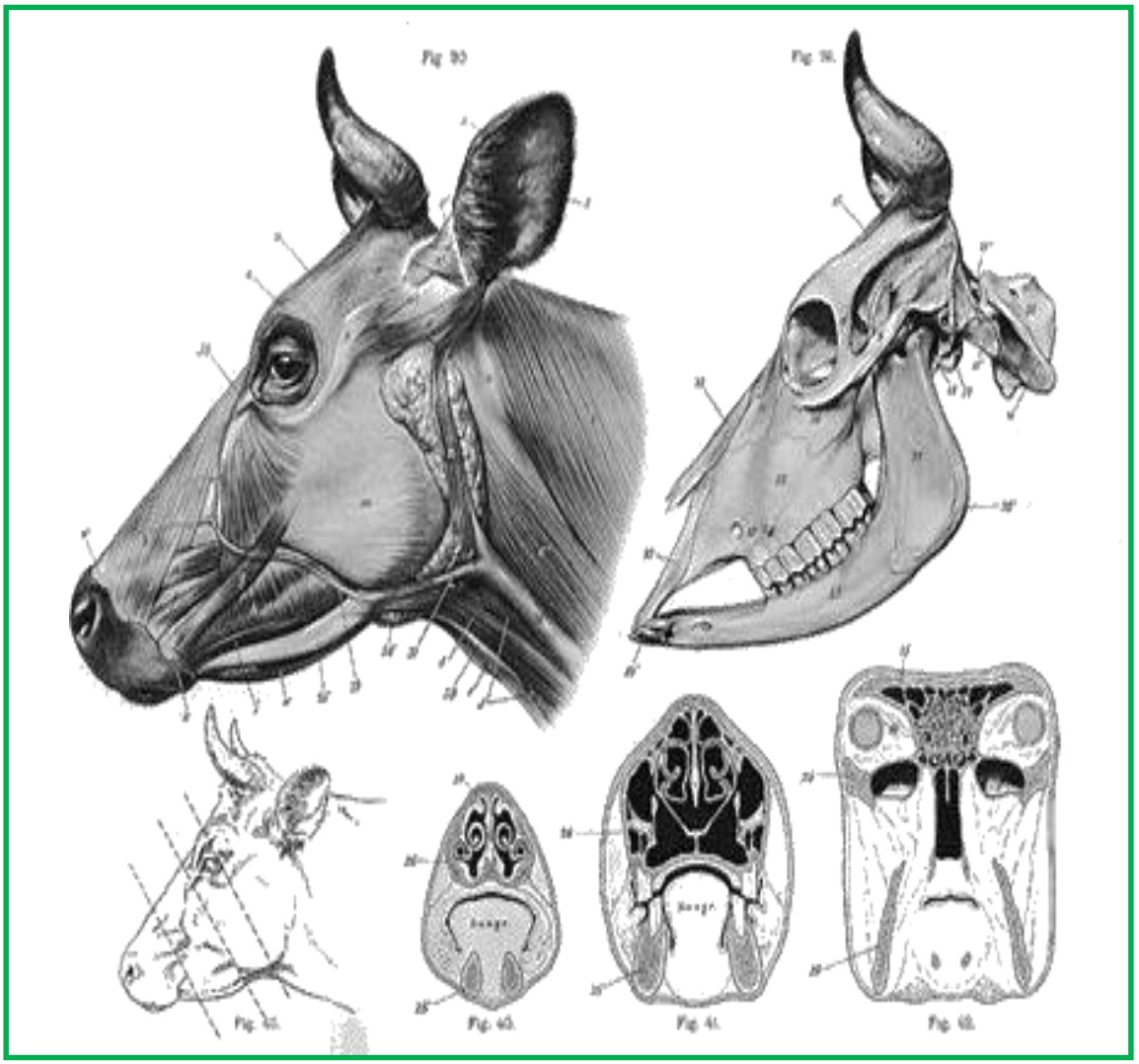
No.	Subjects	Credits	Theoretical	Practical	Total
1	Biology / part 2	Units	2	1	3
		Hours	2	2	4
2	General chemistry / part 2	Units	2	1	3
		Hours	2	2	4
3	Anatomy / part 2	Units	2	2	4
		Hours	2	3	5
4	Animal management / part 2	Units	2	1	3
		Hours	2	2	4
5	Poultry Management	Units	1	1	2
		Hours	1	2	3
6	Computer science / part 2	Units	1	1	2
		Hours	1	2	3
7	Human Rights	Units	2	-	2
		Hours	2	-	2
8	Arabic Language	Units	1	-	1
		Hours	1	-	1

Total Subjects: 8 **Total Units: 20** **Total Hours: 26**


1
SYLLABUS OF FIRST YEAR
2
SYLLABUS OF SECOND YEAR
3
SYLLABUS OF THIRD YEAR
4
SYLLABUS OF FOURTH YEAR
5
SYLLABUS OF FIFTH YEAR

Subject: ANATMOY / PART 3

SECOND Year | **FIRST Semester**



SUBJECT CREDITS

Theoretical	**2** Hours	**2** Units
Practical	**3** Hours	**2** Units
TOTAL	**5** Hours	**4** Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**20**	**30**
Practical	**20**	**30**
TOTAL	**40**	**60**

ANATOMYpart3/Theoretical Subjects

THEORETICALSubject	Hours
DigestiveSystem General description of the digestive system and its embryological development.Mouth cavity and its content like the tongue and hard palate and soft palate withits muscles and cheeks and lips, blood and nerve supply of the tongue. Salivaryglands, pharynx and its layers and muscles and openings. The hyoid apparatus(bonesandmuscles).Musclesofmastication.Courseandrelationshipofesophagus and its structures. Classification of stomach, parts of the intestine,duodenum, jejunum, ileum. The caecum and its variations in farm animals. Colonand its variations in farm animals, rectum, anus. Accessory glands like the liverand its ligaments and lobation, gallbladder and the variations in farm animals.Pancreasanditsvariations.Peritoneumitsreflexationintheabdominalcavityto fixtheabdominalorgans.	**20**
RespiratorySystem Introduction,nose,nasalcavity,nasopharynx,paranasalsinuses,larynx,trachea,lungs,thoracic cavity, pleura.	**10**
Total	**30**

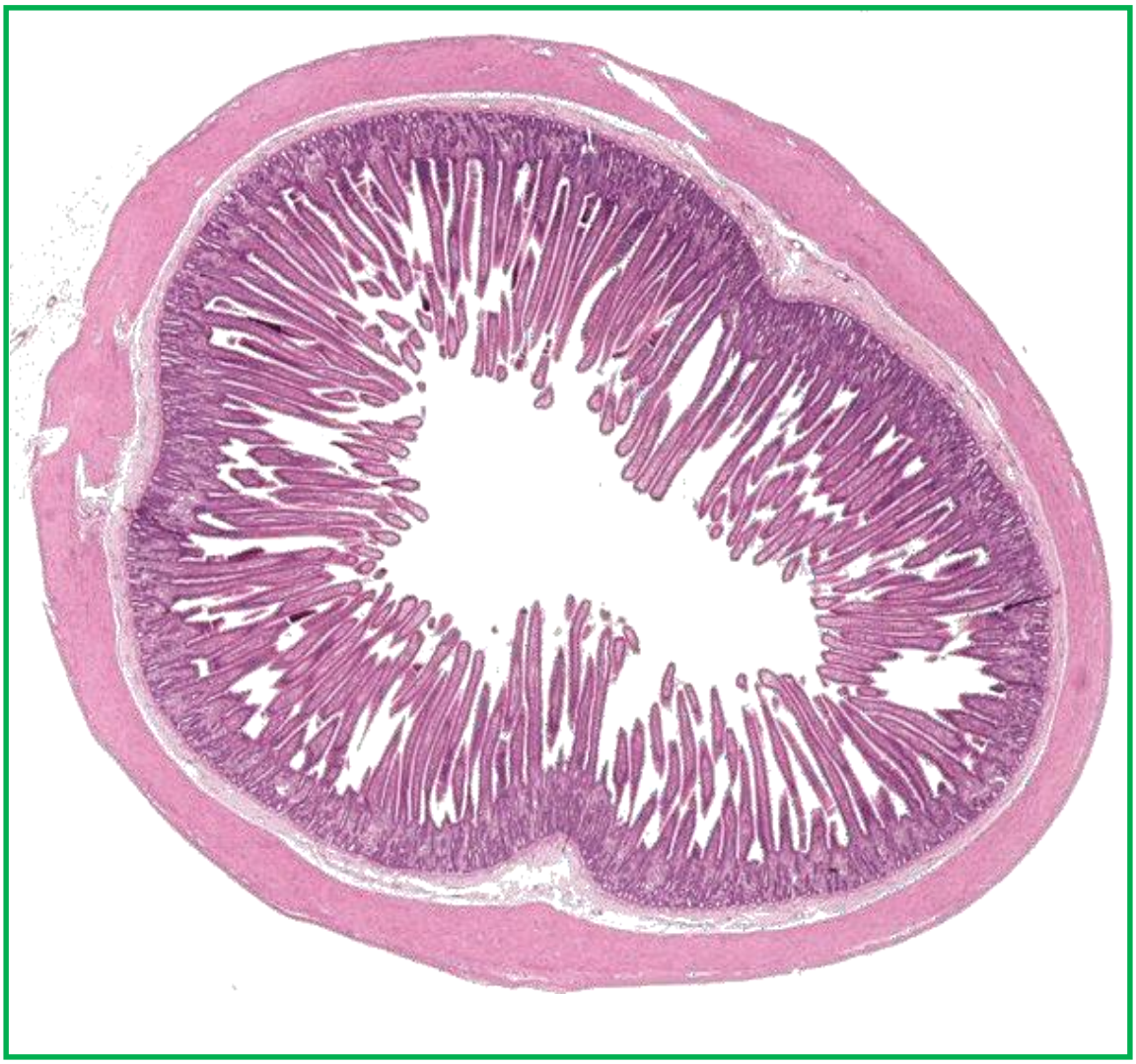
ANATOMYpart1/PracticalSubjects

PRACTICAL Subject	Hours
General description of the skull.	**3**
Cranial cavity, hyoid bone, mandible.	**3**
Skull comparative, Cervical vertebrae comparative	**6**
Dissection of oral cavity with its contents (compassion), muscles of hyoid bone, muscles and papillae of tongue.	**3**
Dissection of pharynx (divisions, muscles, openings, muscles of soft palate, muscles of mastication).	**3**
Viscera: esophagus. Stomach (comparative).	**3**
Viscera: small intestine (comparative). large intestine (comparative).	**3**
Viscera: liver and its ligaments (comparative).	**3**
Dissection of paranasal sinuses, nasal cavity (comparative).	**6**
larynx (laryngeal cartilages, laryngeal cavities, laryngeal muscles), blood and nerve supply to the larynx.	**3**
trachea, pleura, pulmonary ligament, lung comparative, trachea, bronchial tree. Dissection of thorax, thoracic fascia, muscles of thoracic wall, respiratory muscles, internal thoracic fascia	**3**

Review	**3**
Practical examination	**3**
Total	**45**

Subject: HISTOLOGY / PART 1

SECOND Year	FIRST Semester



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**3**	Hours	**2**	Units
TOTAL	**5**	Hours	**4**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**20**	**30**
Practical	**20**	**30**
TOTAL	**40**	**60**

HISTOLOGY part1/Theoretical Subjects

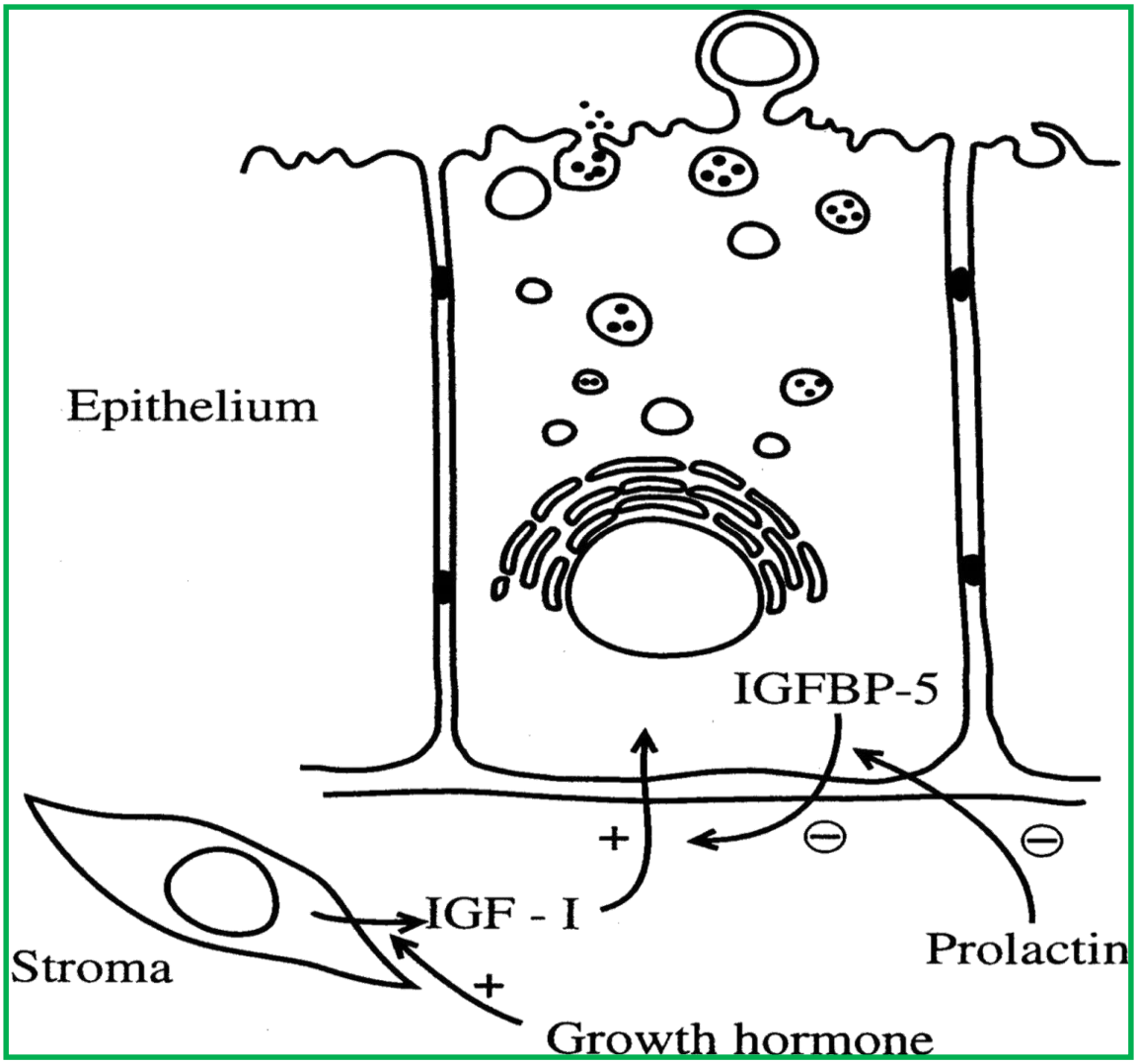
THEORETICALSubject	Hours
Cytology	4
BloodandMyeloidTissue	4
NervousTissue	4
CartilageandBone	4
CardiovascularSystem	4
LymphaticSystem	4
RespiratorySystem	4
Skin	2
Total	**30**

HISTOLOGY part1/Practical Subjects

PRACTICAL Subject	Hours
Laboratory Guiding	3
Cytology	3
Epithelial Tissues	3
Connective Tissues	3
Muscular tissue	3
Bone and Cartilages.	3
Nervous tissue	3
Blood cells	3
Bone marrow	3
Lymph system	3
Cardiovascular system	3
Respiratory system	3
Skin	3
Review	3
Examination	3
Total	**45**

Subject: PHYSIOLOGY / PART 1

SECOND Year	FIRST Semester



SUBJECT CREDITS

Theoretical	**4**	Hours	**4**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**6**	Hours	**5**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**32**	**48**
Practical	**8**	**12**
TOTAL	**40**	**60**

PHYSIOLOGYpart1/TheoreticalSubjects

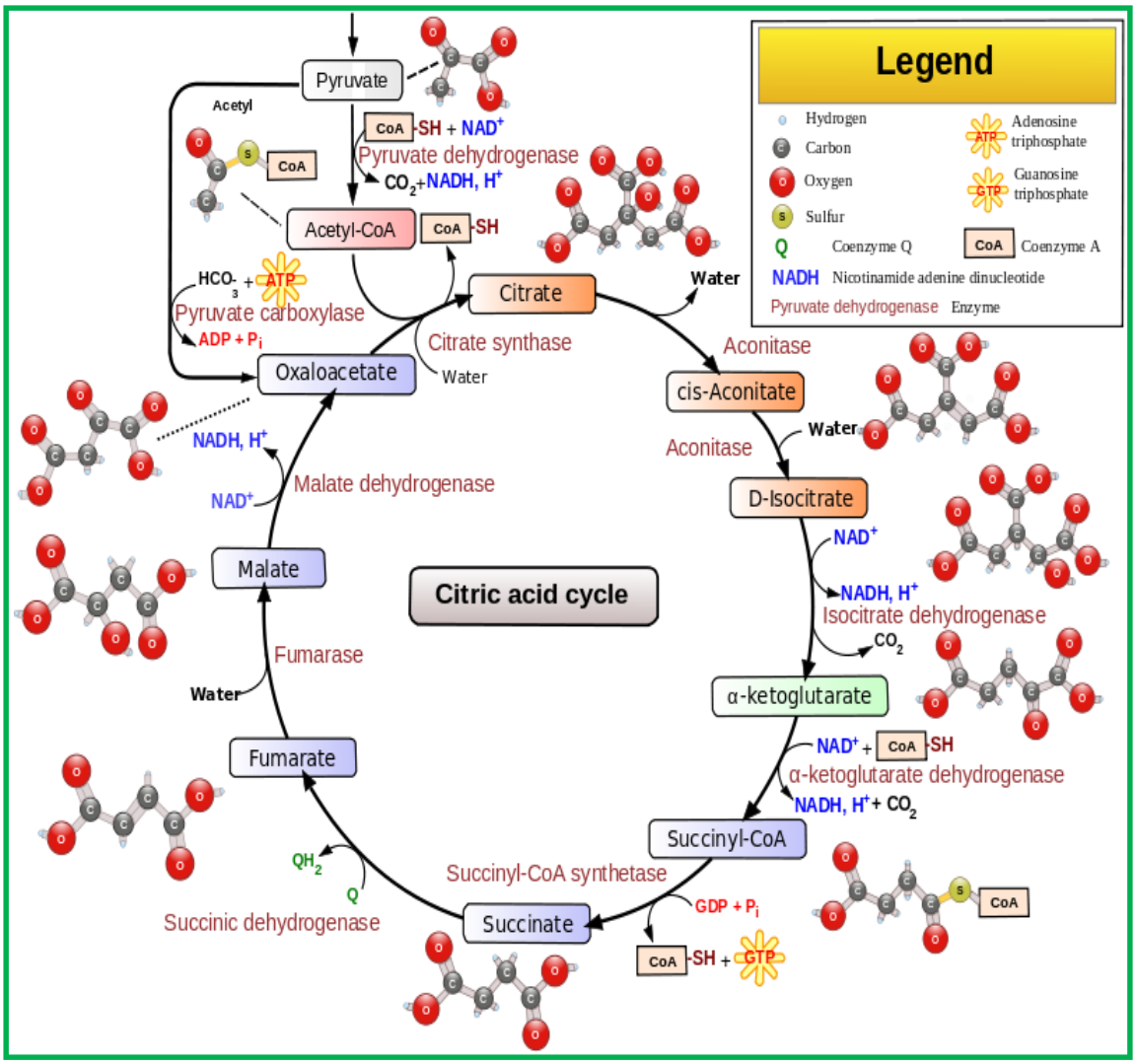
THEORETICALSubject	Hours
Introductiontophysiologyandcellmembrane	3
Nervecellphysiology	3
Musclecellphysiology	3
Theautonomicnervoussystemphysiology	3
Bloodcompositionandphysiology	10
Lymphcompositionandfunction	1
Cerebrospinalfluidcompositionandfunction	1
Cardiovascularsystemphysiology	8
Respirationsystemphysiology	8
Digestivesystemphysiology	20
Total	**60**

PHYSIOLOGYpart1/PracticalSubjects

PRACTICAL Subject	Hours
Introduction, Frog sciatic nerve and gastrocnemius muscle preparation	4
Simple muscle twitch and effect of temperature on muscle contraction	2
Effect of prolonged and strength stimulation on muscle contraction	2
Effect of repeat stimulation on muscle contraction	2
Frog`s heart	2
Extra systole and compensatory pause and Stannius ligatures	2
Blood pressure in man and effect of exercise.	2
Venous flow, venous pressure, reactive hyperemia, cold pressor test	2
RBC	2
WBC	2
Hb	2
ESR	2
PCV estimation	2
Wintrobe erythrocyte index	2
Total	**30**

Subject: BIOCHEMISTRY / PART 1

SECOND Year | **FIRST Semester**



SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**5**	Hours	**4**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**30**	**45**
Practical	**10**	**15**
TOTAL	**40**	**60**

BIOCHEMISTRYpart1/ TheoreticalSubjects

THEORETICALSubject	Hours
CellBiochemistry Metabolicprocessesoccurincellorganelles,Cellmembranecomponents, Moleculestransportthroughcellmembrane.	**4**
Enzymes Mechanismofaction,Kinetic,Regulation.	**7**
Vitamins Watersolublevitamins,Fatsolublevitamins.	**10**
Bioenergetic High-energy-p–compounds,Low-energy-p-compounds,Biologicoxidation,Respiratorychain.	**6**
Carbohydratemetabolism Digestionandabsorption,Glycolysis.Krebscycle,Pentosephosphatepathway,Gluconeogenesis,Glycogenolysis,Glycogenesis, Controlofbloodglucose.	**10**
ProteinandAminoacidsmetabolism Digestionandabsorption,Catabolismofaminoacids,Transamination,Oxidativedeamination,NH3 formation, NH3excretion, Ureacycle.	**8**
Total	**45**

2nd

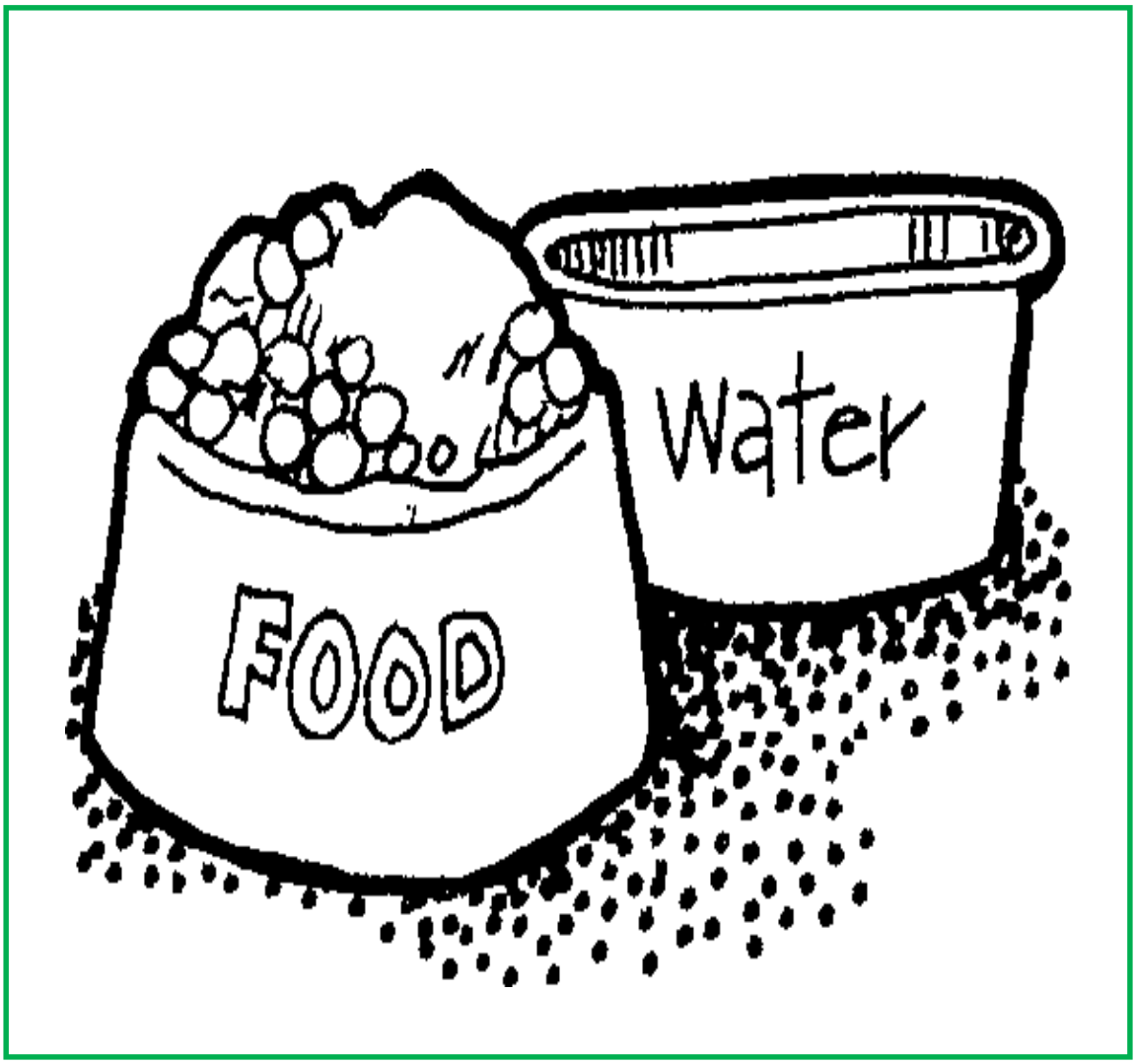
BIOCHEMISTRYpart1/PracticalSubjects

PRACTICAL Subject	Hours
General instruction and qualitative tests of carbohydrates	**4**
Testing of unknown carbohydrates	**2**
Glycogen	**2**
General reactions of proteins	**2**
Fibrous proteins	**2**
Glyoproteins	**2**
Albumin and globulins	**2**
Phosphoproteins	**2**
Enzymes: digested activity of salivary amylase	**2**
Effect of (pH) on the activity of salivary amylase	**2**
Effect of temperature on the activity of salivary amylase	**2**
Urine analysis: physical properties of normal urine	**2**
Normal constituents of urine	**2**
Abnormal constituents of urine	**2**

Total	**30**

Subject: ANIMAL NUTRITION / PART 1

SECOND Year	FIRST Semester



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

ANIMALNUTRITION part1/TheoreticalSubjects

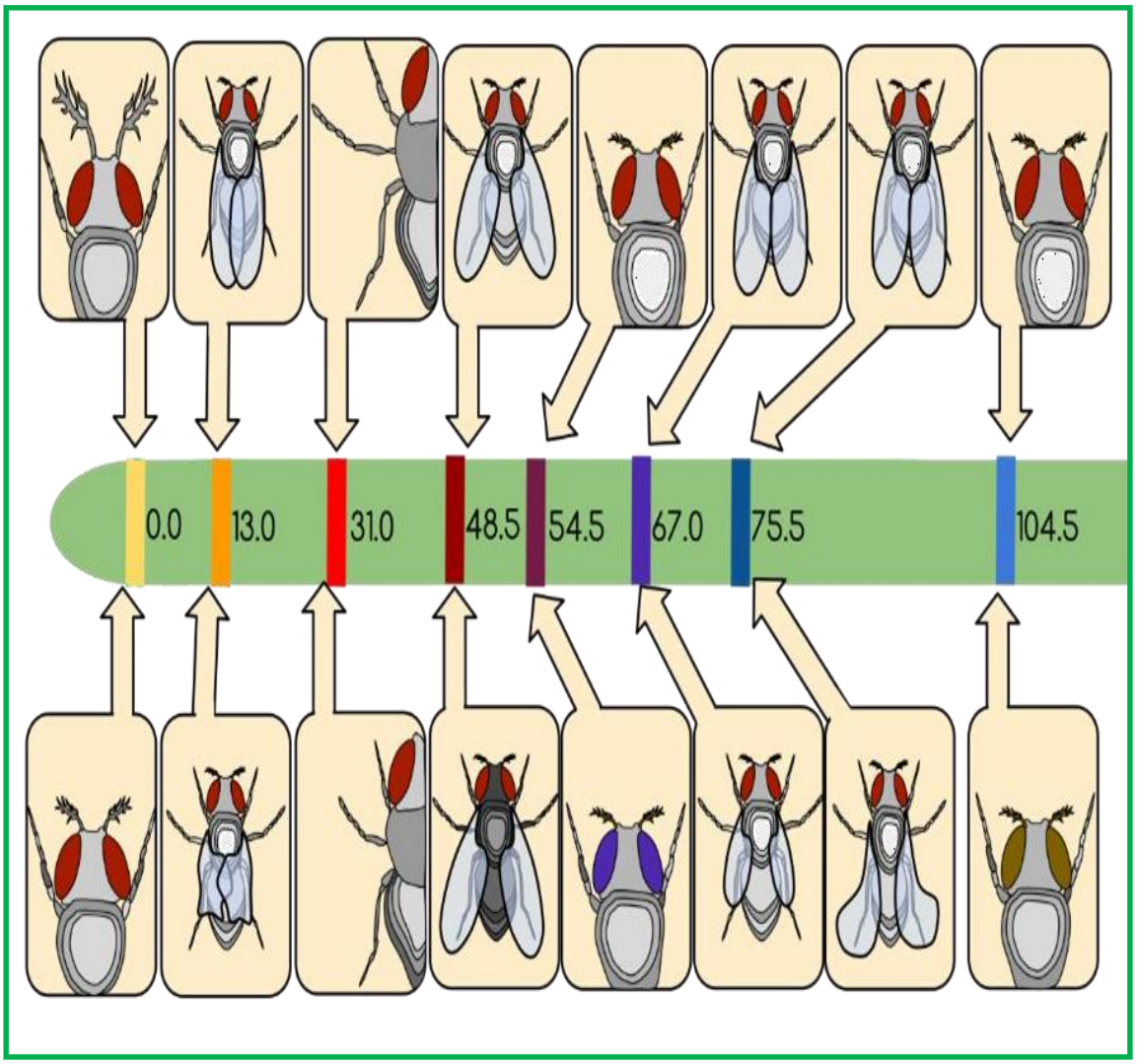
THEORETICALSubject	Hours
Introductionandimportanceofnutritionoffarmanimals.	4
Theanimalandits food.	4
Waterandits functions,regulationandcomparativeuse.	2
EnergyMetabolism.	4
CarbohydrateMetabolism.	4
ProteinandnucleicacidsMetabolism.	2
Lipidmetabolism	2
Evaluationofproteins	2
Expressingenergyvaluesoffeeds	2
Rationformulation	4
Total	**30**

ANIMALNUTRITION part1/PracticalSubjects

PRACTICAL Subject	Hours
How to use nutrition laboratory.	4
What is the feedstuffs approximate analysis?	4
How to make the samples and prepare it to use.	4
Determination of moisture in feed suffs, green roughages, milk, meat	4
Determination of ash	4
Determination of silica	4
How to make standard solution	3
Determination of crude protein.	3
Total	**30**

Subject: GENETICS

SECOND Year	FIRST Semester



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical				
TOTAL	**2**	Hours	**2**	Units

MARK DETAILS

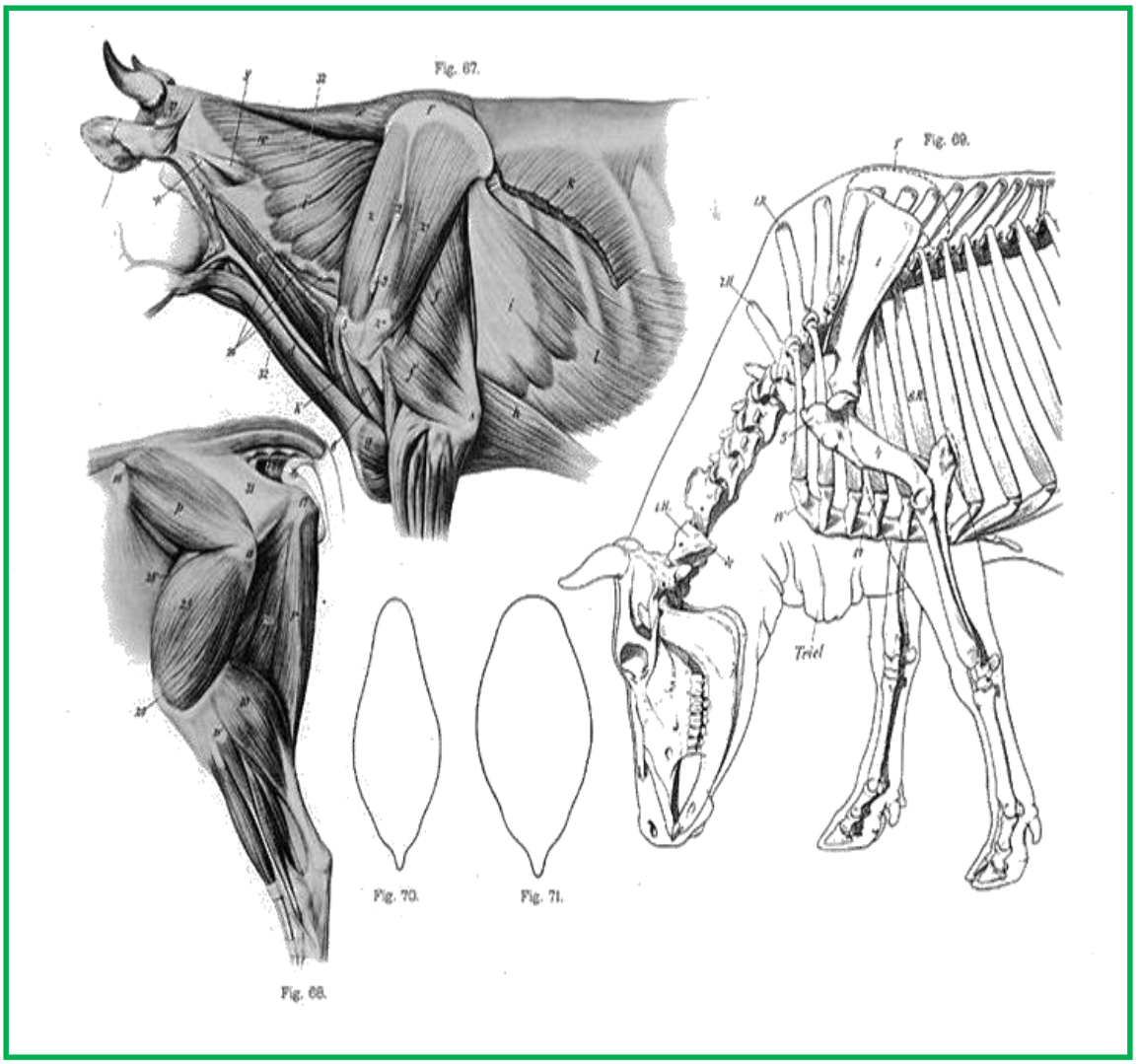
	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

GENETICS /TheoreticalSubjects

THEORETICALSubject	Hours
DevelopmentofGeneticsanditstheories.	3
Cellandchromosomebehaviors	3
MundeleinLawsanditsmodification	3
Geneticsandstatisticsintheanalysisofgenealogy	3
Theinteractionbetweengenes	3
Multipleallelesandallelesfalse	3
Assignedsexandgenetics associatedwithit	3
Link,transitandgeneticmaps	3
Chromosomalmutations	2
Chemicalbasisandengineeringofheredity	2
Quantitativegeneticsandanimalimprovement	2
Total	**30**

Subject: ANATMOY / PART 4

SECOND Year	SECOND Semester



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	2	Hours	**1**	Units
TOTAL	4	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

ANATOMYpart4/Theoretical Subjects

THEORETICALSubject	Hours
LymphaticSystem Introduction, lymph, lymph vascular system. lymphatic tissue, lymph vessels,lymph capillaries, lymphatic tissue structures, solitary lymph nodules, tonsils,lymphnodes,lymphcenter,hemalnodes,lymphtrunksandducts,thymus,spleen	**12**
NervousSystem Developmentofthebrain.Centralnervoussystem:brain,partsofthebrain(spinal cord,cranialnerves,spinalnerves).Autonomicnervoussystem:sympatheticdivision, parasympatheticdivision. Meninges,cerebrospinalfluid.	**12**
CardioVascularSystem(HeartandArteries) Introduction, heart and pericardium, pericardium, heart, the size and position andshapeandlocationofheart,groovesoftheheart,leftandrightatrium,leftandrightventricle, blood supply of heart, nerve supply of heart, arteries; aorta, ascendingaorta,brachiocephalictrunk,descendingaorta,thoraxaorta(branches),abdominalaorta(branches),bloodsupplyofthethoraciclimb, blood supplyof thehind limb	**6**
Total	**30**

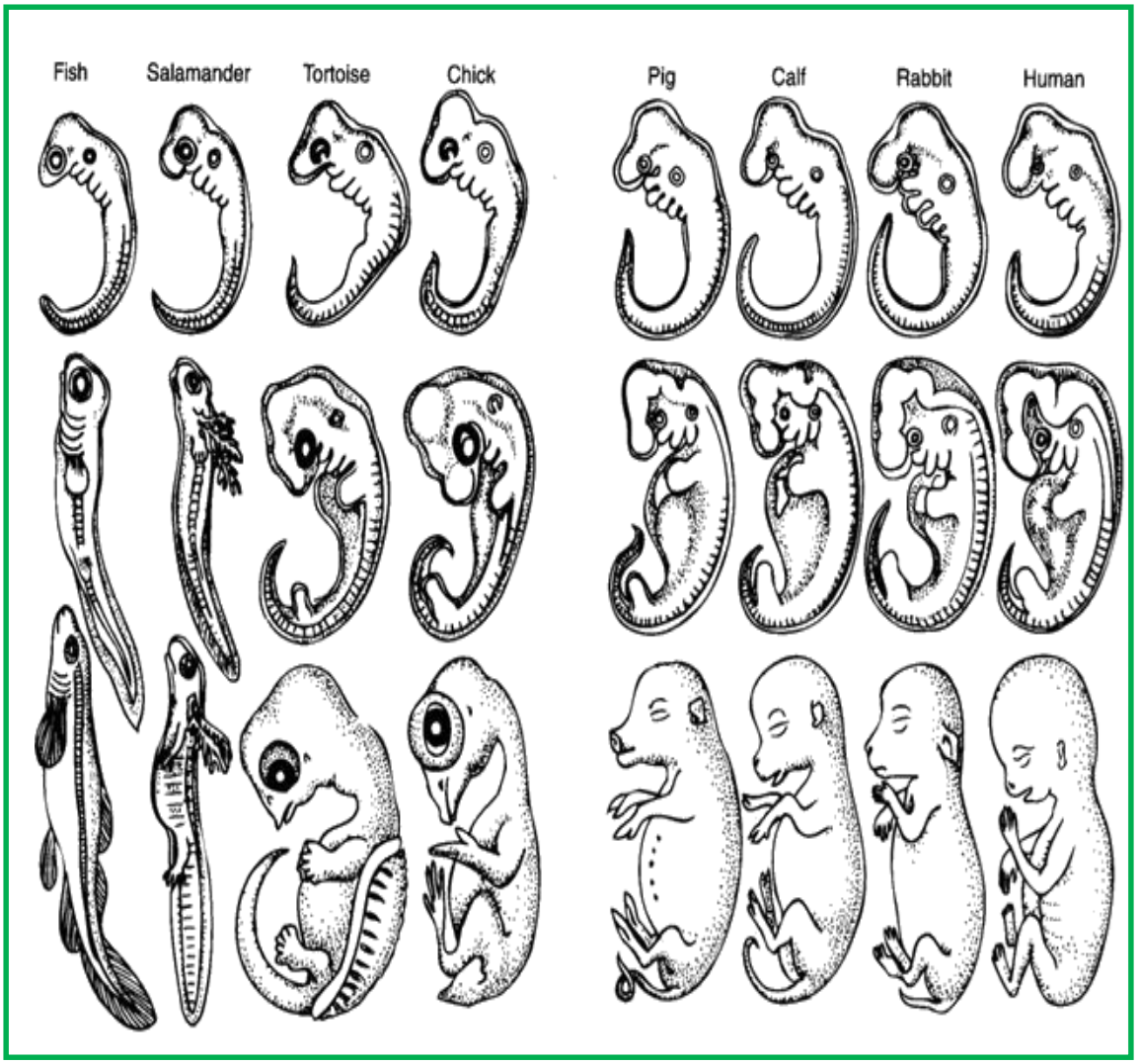
ANATOMYpartIV/PracticalSubjects

PRACTICAL Subject	Hours
Superficial dissection of face region (muscles, nerves, arteries, veins).	***2***
Deep dissection of face region (muscles, nerves, arteries, veins, parotido auricular region, buccal region, mental region).	***2***
The brain, cranial and spinal meninges, parts of brain, cranial nerves.	***2***
Dissection of neck region (lateral and ventral surfaces) including chief veins, nerves, arteries, muscles, thyroid gland, lymph nodes thymus.	**2**
Dissection of neck region (dorsal and lateral surfaces) including chief muscles and nerves.	**2**
Nerves in thoracic cavity (phrenic, vagus, sympathetic chain)	**2**
pericardium, cranial and caudal venae cavae, and venous azygous	**2**
Circulatory system: pericardium and the heart, chambers of the heart and the major vessels of the heart.	**2**
Aortic arch, common brachiocephalic trunk with its branches, thoracic aorta with its branches, diaphragm, respiratory muscles	**4**
Lymph centers in abdominal cavity, spleen.	**2**

Abdominal aorta with its branches, Dissection of abdominal wall (muscles and nerves). Terminal branches of abdominal aorta	**4**
Review and Examination	**4**
Total	**30**

Subject: EMBRYOLOGY

SECOND Year	SECOND Semester



SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical				
TOTAL	**1**	Hours	**1**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

EMBRYOLOGY /TheoreticalSubjects

THEORETICALSubject	Hours
Introductiontoembryology,phasesofontogeneticdevelopment,phase ofgametogenesis	1
phaseofFertilization,	1
phaseofcleavage,Implantationprocess	1
Formationoffatalmembranes	1
PhaseofGastrulationandnotochordformation	1
Mesodermdifferentiationandneurulationprocess	1
Developmentofcardiovascularsystem	1
Developmentofnervoussystem	1
Developmentofbrachialarchesandpharyngealpouches	1
Developmentofdigestivesystem	1
Developmentofurinarysystem	1
Developmentofgenitalsystem	1
Developmentofrespiratorysystem	1
Developmentofskeletalsystem	1
Developmentoflymphaticsystem	1
Total	**15**

Subject: HISTOLOGY / PART 2

SECOND Year	SECOND Semester

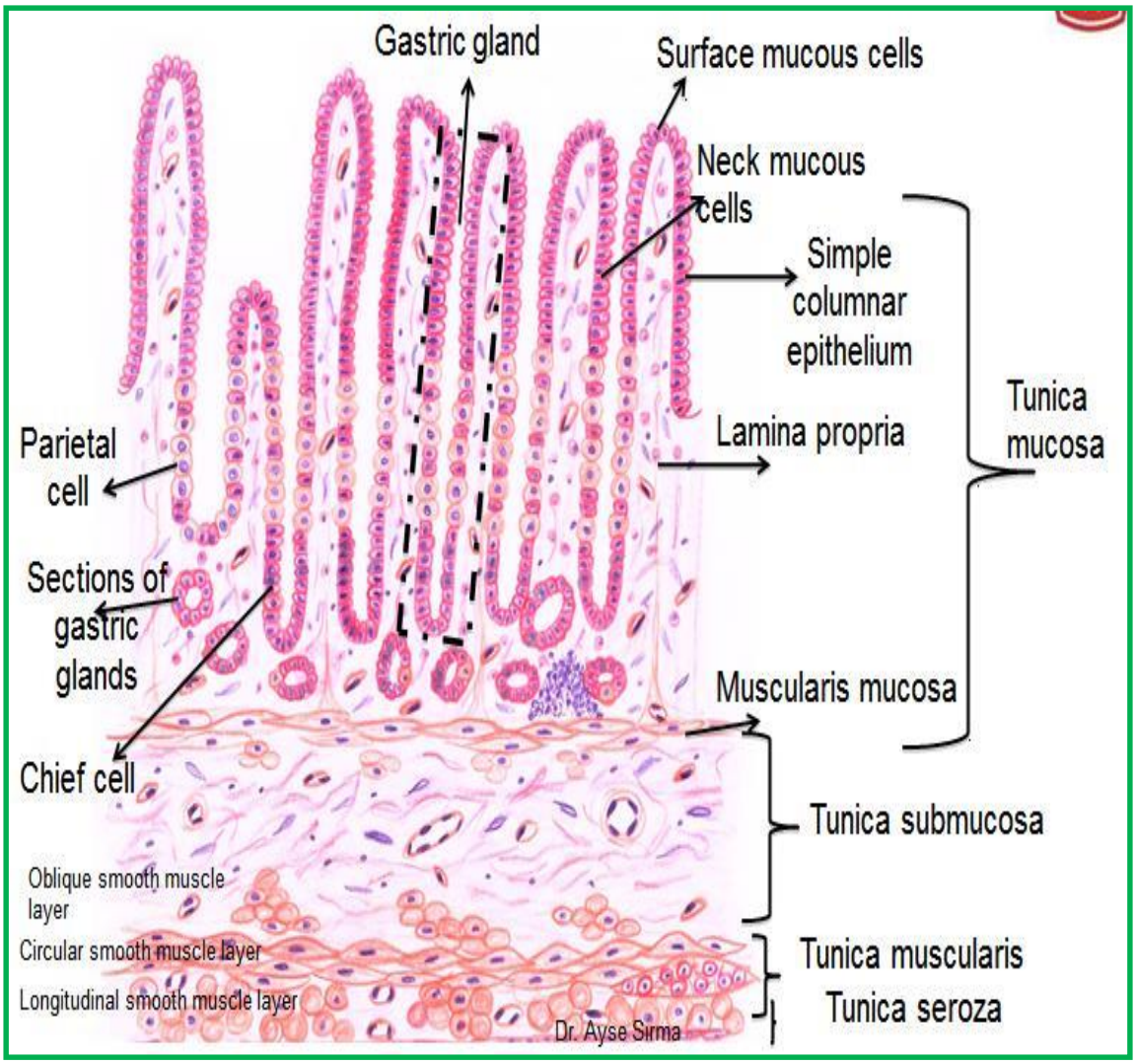
SUBJECT CREDITS

Theoretical	**2** Hours	**2** Units
Practical	**3** Hours	**1** Units
TOTAL	**5** Hours	**3** Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**

TOTAL	**40**	**60**


Gastric gland
Surface mucous cells
Neck mucous cells
Simple columnar epithelium
Tunica mucosa
Lamina propria
Parietal cell
Sections of gastric glands
Muscularis mucosa
Chief cell
Tunica submucosa
Oblique smooth muscle layer
Circular smooth muscle layer
Tunica muscularis
Longitudinal smooth muscle layer
Tunica seroza
Dr. Ayse Sirma

HISTOLOGY part2/Theoretical Subjects

THEORETICALSubject	Hours
DigestiveSystem	6
UrinarySystem	5
EndocrineSystem	4
MaleReproductiveSystem	6
FemaleReproductiveSystem	6
SensoryOrgans	3
Total	**30**

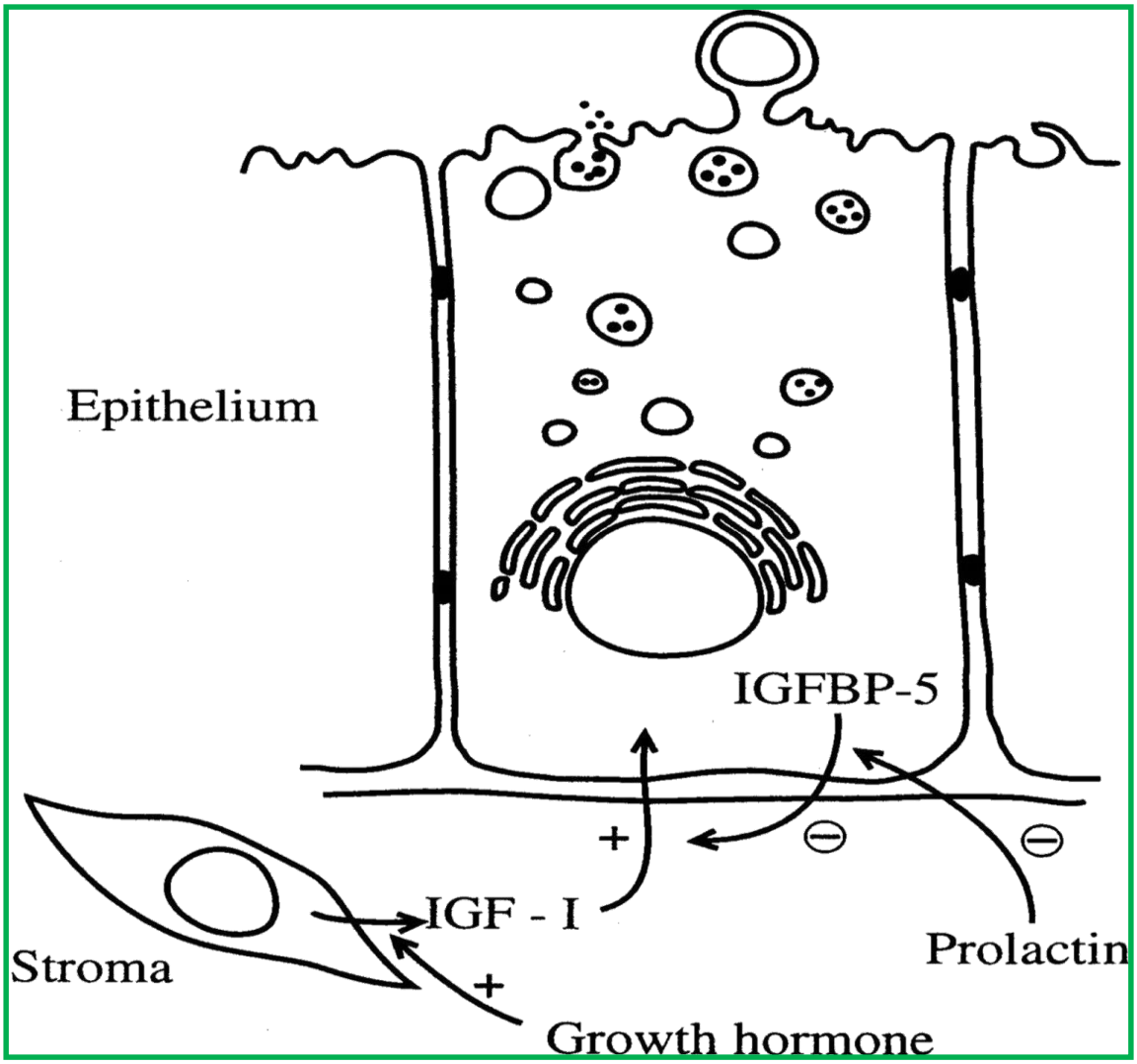
HISTOLOGY part2/Practical Subjects

PRACTICAL Subject	Hours
Tongue structure, lingual papillae.	3
Salivary glands: parotid, sublingual, submaxillary, esophagus.	3
Fundic gland region of stomach, pyloric gland region of stomach, rumen, reticulum, omasum.	3
Small intestine: duodenum, jejunum, ileum, large intestine, recto anal canal.	3
Liver, gallbladder, pancreas.	3
Endocrine glands: hypophysis (pituitary gland)	3
adrenal gland (in human and horse), thyroid gland, parathyroid gland.	3
Urinary system: kidney, ureter, urinary bladder.	3
Male genital system: testis, epididymis, vas deferens.	3
Female genital system: ovary, corpus luteum, uterine tube (oviduct), uterus (secretory phase and proliferative phase).	3
Eye: cornea, retina.	3
Ear: cochlea, corti organ.	3
Mammary gland (active and in active).	3

Review	**3**
Examination	**3**
Total	**45**

Subject: PHYSIOLOGY / PART 2

SECOND Year	SECOND Semester



SUBJECT CREDITS

Theoretical	**4**	Hours	**4**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**6**	Hours	**5**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**32**	**48**
Practical	**8**	**12**
TOTAL	**40**	**60**

PHYSIOLOGYpart2/TheoreticalSubjects

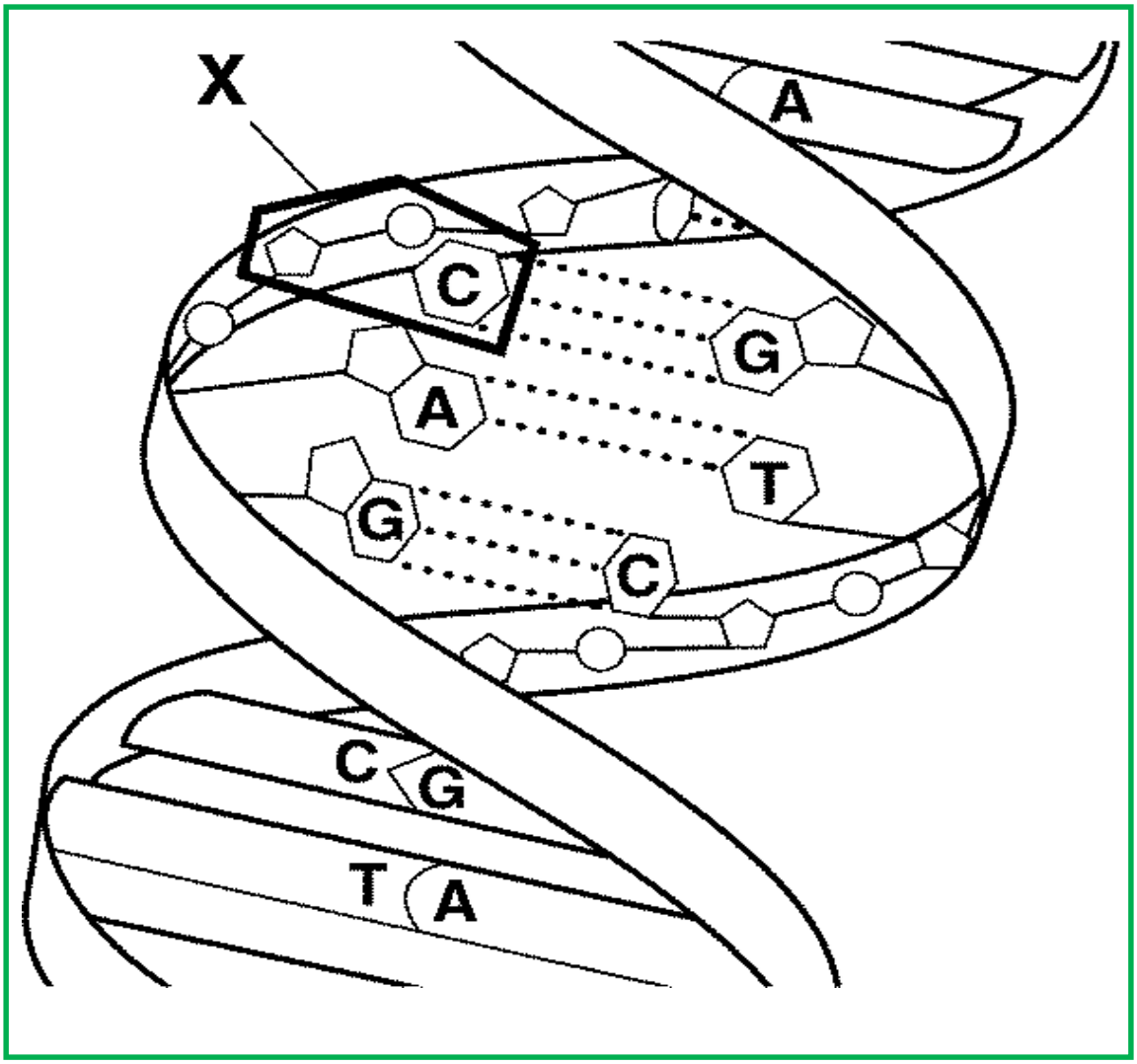
THEORETICAL Subject	Hours
Kidney and Urinary System	**14**
Endocrine System	**20**
Male and Female Reproductive System	**20**
Central Nervous System	**6**
Total	**60**

PHYSIOLOGYpart2/PracticalSubjects

PRACTICAL Subject	Hours
Blood groups and coagulation time.	**2**
Measurements of respiratory volume-spirometry	**2**
Measurement of pulmonary ventilation and respiratory movements.	**2**
Salivary digestion.	**2**
Nervous system: reflex action in man (cutaneous and deep reflexes) and taste.	**2**
Eye reflexes	**2**
Response time.	**2**
Sensory physiology	**2**
Taste	**2**
Vision	**2**
Hearing	**2**
Estrous cycle in rat.	**2**
Evaluation of seminal quality	**2**
Concentration of spermatozoa	**2**
Ovariectomy in rat	**2**
Total	**30**

Subject: BIOCHEMISTRY / PART 2

SECOND Year	SECOND Semester



SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**5**	Hours	**4**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**30**	**45**
Practical	**10**	**15**
TOTAL	**40**	**60**

BIOCHEMISTRYpart2/ TheoreticalSubjects

THEORETICALSubject	Hours
Plasmaproteins	6
Lipidmetabolism:Digestionandabsorption,FAoxidation,FAsynthesis,T.Gsynthesis,Cholesterolsynthesis,Cholesterolesterification,Bileacids,Lipoproteins,Ketonebodies,Importanceof acetylCoA,Prostaglandins.	12
Nucleotids&nucleicacids:Structure,function,Purine&pyrimidine metabolism,DNAorganization,replication,RNAsynthesis.	7
Proteinsynthesis	6
Hormones:Action,Pituitary&hypothalamushormones,Thyroid hormones,Adrenalhormones,Gonadshormones,Pancreashormones.	10
Freeradicalandantioxidants	4
Total	**45**

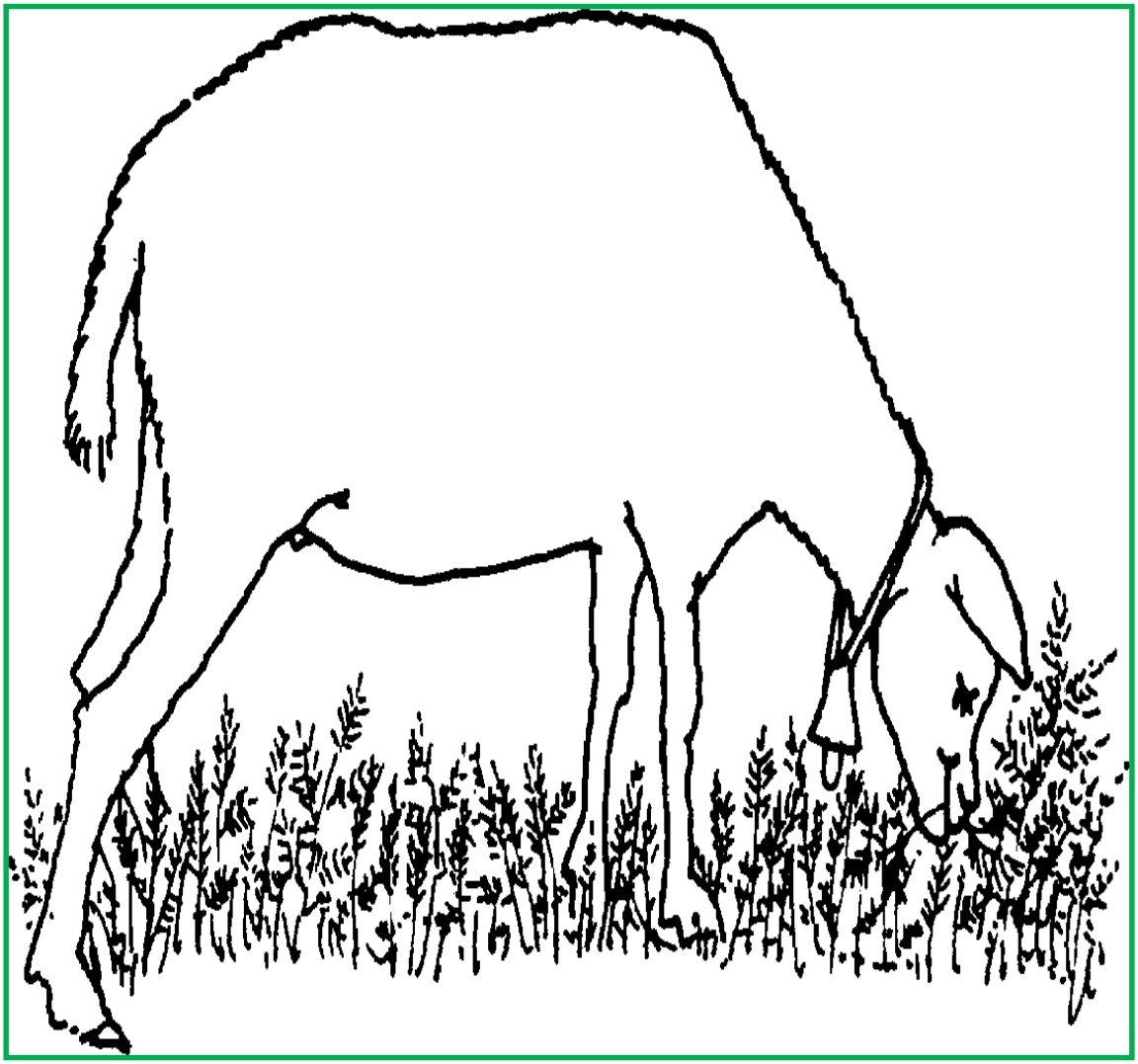
BIOCHEMISTRYpart2/PracticalSubjects

PRACTICAL Subject	Hours
Photometric Analysis of Biochemical Molecules	2
Photometric Analysis of Biochemical Molecules	2
Determination of Serum Total Protein	2
Determination of Serum Total Protein Using Standard Curve	2
Determination of Serum Inorganic Phosphate	2
Determination of Serum Calcium	2
Determination of Serum Total Cholesterol	2
Determination of Serum Total Lipids	2
Determination of Serum Creatinine	2
Determination of Serum Uric Acid	2
Determination of Serum Bilirubin	2
Enzymatic Method for Determination of Glucose	2
Determination of Serum Amylase Activity	2
Determination of Serum urea	2
Determination of serum transaminase	2

Total	**30**

Subject: ANIMAL NUTRITION / PART 2

SECOND Year **SECOND Semester**



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

ANIMALNUTRITION part2/TheoreticalSubjects

THEORETICALSubject	Hours
Essential elements, functionsand deficiency symptoms.	8
Vitamins,functionsanddeficiencysymptoms.	6
Evaluationoffood:digestibility,Energycontentoffoodsandpartition	6
Methodsofnutritionalrequirementoffarmanimals	4
Feedingmaintenanceandgrowth:Ruminants,Rabbits,Poultry.	6
Total	**30**

ANIMALNUTRITION part2/PracticalSubjects

PRACTICAL Subject	Hours
Determination of ether extract	4
Determination N.F.E by chemical method and calculated method	4
Determination of crude fiber	4
Determination of gross energy by chemical method	4
Determination of gross energy by calculated method	4
Determination of gross energy by bomb calorimeter	4
The digestion trials: How to make standard ration for farm animals	6
Total	**30**

Subject: STATISTICS

SECOND Year	SECOND Semester

SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

STATISTICS/TheoreticalSubjects

THEORETICALSubject	Hours
Definitionstatisticsandstatisticalsymbols	4
Descriptivestudyofthedata	2
Mediatemeasures(concentration)	2
Dispersionanddifferencesmeasurements	2
Simpleregressionandcorrelation	2
Principlesofprobability	4
Discreteprobabilitydistributions	2
Continuousprobabilitydistributions	4
HypothesesTestes	2
Ztest	2
t test	2
X^2test	2
Total	**30**

STATISTICS/PracticalSubjects

PRACTICAL Subject	Hours
Definition statistics and statistical symbols	4
Descriptive study of the data	2
Mediate measures (concentration)	2
Dispersion and differences measurements	2
Simple regression and correlation	2
Principles of probability	4
Discrete probability distributions	2
Continuous probability distributions	4
Hypotheses Testes	2
Z test	2
t test	2
X^2 test	2
Total	**30**

Curriculum Summary for Second Year Subject / First semester

No.	Subjects	Credits	Theoretical	Practical	Total
1	Anatomy / part 3	Units	2	2	4
		Hours	2	3	5
2	Histology / part 1	Units	2	2	4
		Hours	2	3	5
3	Physiology / part 1	Units	4	1	5
		Hours	4	2	6
4	Biochemistry / part 1	Units	3	1	4
		Hours	3	2	5
5	Animal nutrition / part 1	Units	2	1	3
		Hours	2	2	4
6	Genetics	Units	2	-	2
		Hours	2	-	2

Total Subjects: 6 Total Units: 22 Total Hours: 27

Curriculum Summary for Second Year Subject / Second semester

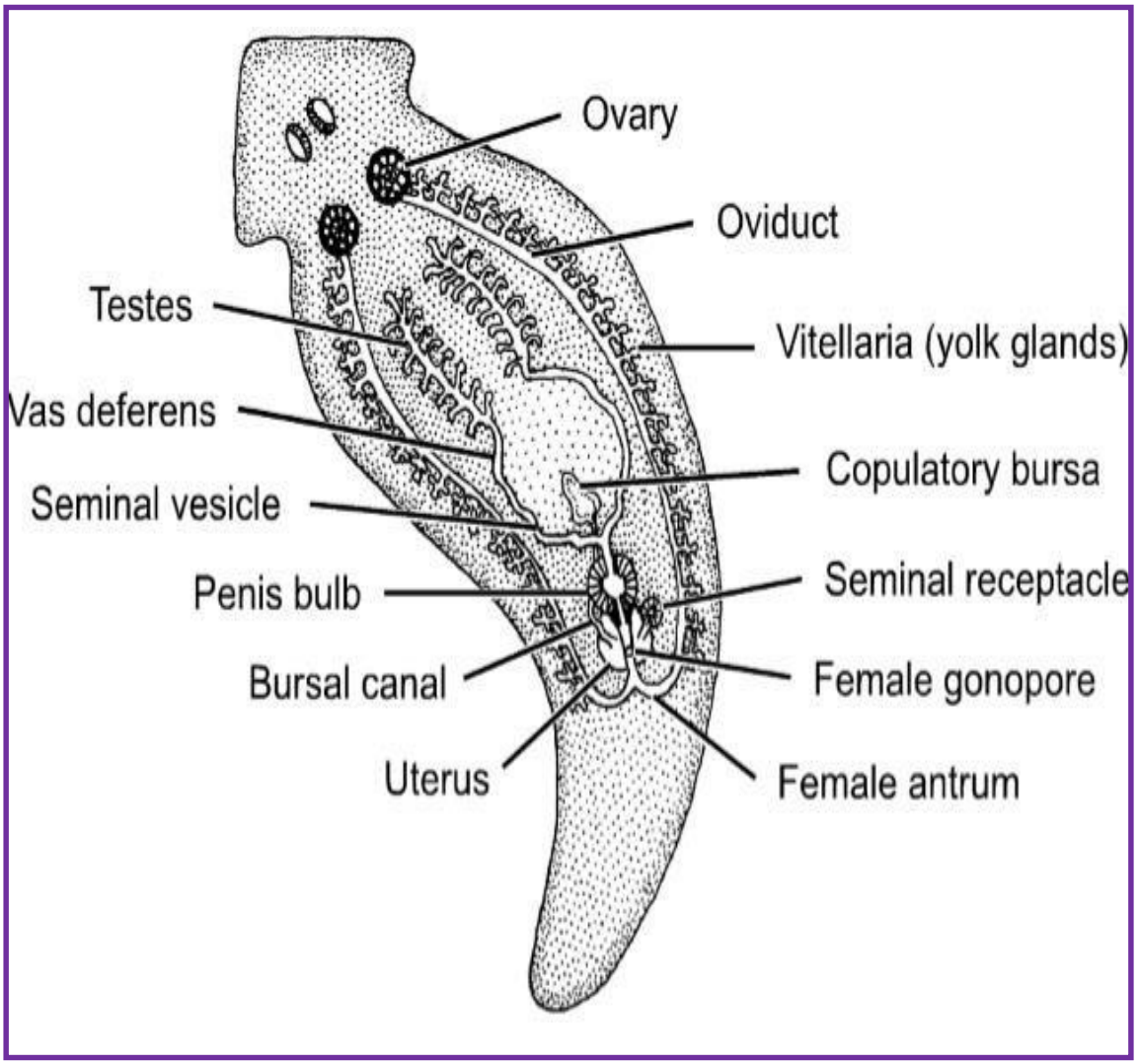
No.	Subjects	Credits	Theoretical	Practical	Total
1	Anatomy / part 4	Units	2	1	3
		Hours	2	2	4
2	Embryology	Units	1	-	1
		Hours	1	-	1
3	Histology / part 2	Units	2	1	3
		Hours	2	3	5
4	Physiology / part 2	Units	4	1	5
		Hours	4	2	6
5	Biochemistry / part 2	Units	3	1	4
		Hours	3	2	5
6	Animal nutrition / part 2	Units	2	1	3
		Hours	2	2	4
7	Statistics	Units	2	1	3
		Hours	2	2	4

Total Subjects: 7 Total Units: 22 Total Hours: *29*


1
SYLLABUS OF FIRST YEAR
2
SYLLABUS OF SECOND YEAR
3
SYLLABUS OF THIRD YEAR
4
SYLLABUS OF FOURTH YEAR
5
SYLLABUS OF FIFTH YEAR

Subject: HELMINTHOLOGY

THIRD Year | **FIRST Semester**



SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**5**	Hours	**4**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**30**	**45**
Practical	**10**	**15**
TOTAL	**40**	**60**

HELMINTHOLOGY/TheoreticalSubjects

THEORETICAL Subject	Hours
Introduction & Definitions of Terms Effects of parasites on their hosts	2
Transmission of parasite infestation, life cycle, Immunology	3
Phylum: Nemathelminthes /**Families:** Ascardidae Oxyuridae,Hetrakidae Subuluridae, Rhabditidae Strongyloididae, Trichonematidae, Ancylostomatidae, Trichostrongylidae Dictyocaulidae, Metastrongyloidae Spiruridae, Fillariidae, Trichinellidae Trichuridae.	20
Phylum: Trematoda / **Families:** Fasciolidae, Dicrocoelidae, Parmaphistomatidae, Schistosomatidae.	8
Phylum: Platyhelminthes / **Families:** Taeniidae, Anoplocephaliadae, Thysanosonidae, Davaineidae, Dipylidiidae, Hymenolepididae, Mesocestoidae, Diphllobothriidae.	12
Total	**45**

HELMINTHOLOGY/PracticalSubjects

PRACTICALSubject	Hours
Laboratorydiagnosisofparasitism	2
Parascarisequorum,Toxocaracanis,Oxyurisequi,Ascaridiagalli, Hetrakisgallinarum,Subulurabrumptii	2
Strongylidaecopulatorybursa,Strongylusvulgaris,S.equines Chabertiaovina,Ancylostomacaninum,Bunostomumsp	2
Haemonchuscontortus(maleandfemale), Ostertagia(3sp) *Dictyocalusfilarial*(male)	3
Habronema(maleandfemale),Thelazia,*Setariadigiata*(female) *Trichinellaspiralis*(larvalstage),*Trichuristrichura*	2
Fasciolahepatica, Lifecycle,*Fasciolagigantica*	2
Dicrocoeliumdendriticum,Metagonimusyokcagaw, Paramphistomatidae(3genuses)	2
Schistoma(male,female)Incopulation. eggsof*S.mansoni*,and*S.japonicum*andcercaria	3
Monieziaexpansa, (Matureegg,scolex),M.bendeni. Avitellina(matureandgravid),Thysaniezia(matureandgravid)	3
Raillietina(matureand gravid) Scolex of*R. tetragona,R. echinobothrida,R. cesticillusDipylidiumcaninum*(matureandgravid),*Hymenolepi snana*	3
Taeniaspp(eggs,mature,gravidandscolex)of*T.pisiformis* protoscolexof*Coenuruscerebralis*	3
Echinococcusgranulosus,protoscolexof Hydatidcyst *Mesocestoideslineatus*(matureandgravid),Spirometra(mature)	3

Subject: PHARMACOLOGY / PART 1

THIRD Year	FIRST Semester

SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**5**	Hours	**4**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**30**	**45**
Practical	**10**	**15**
TOTAL	**40**	**60**

PHARAMACOLOGYpart1/TheoreticalSubjects

THEORETICAL Subject	Hours
General principles of pharmacology (pharmacokinetic and pharmacodynamics)	10
Drugs acting on the autonomic and somatic nervous systems	8
Drugs acting on central nervous system	9
Drugs acting on gastrointestinal function	7
Drugs acting on the cardiovascular system and blood	5
Drugs affecting renal function and fluid electrolyte balance	3
Drugs affecting the respiratory system	3
Total	**45**

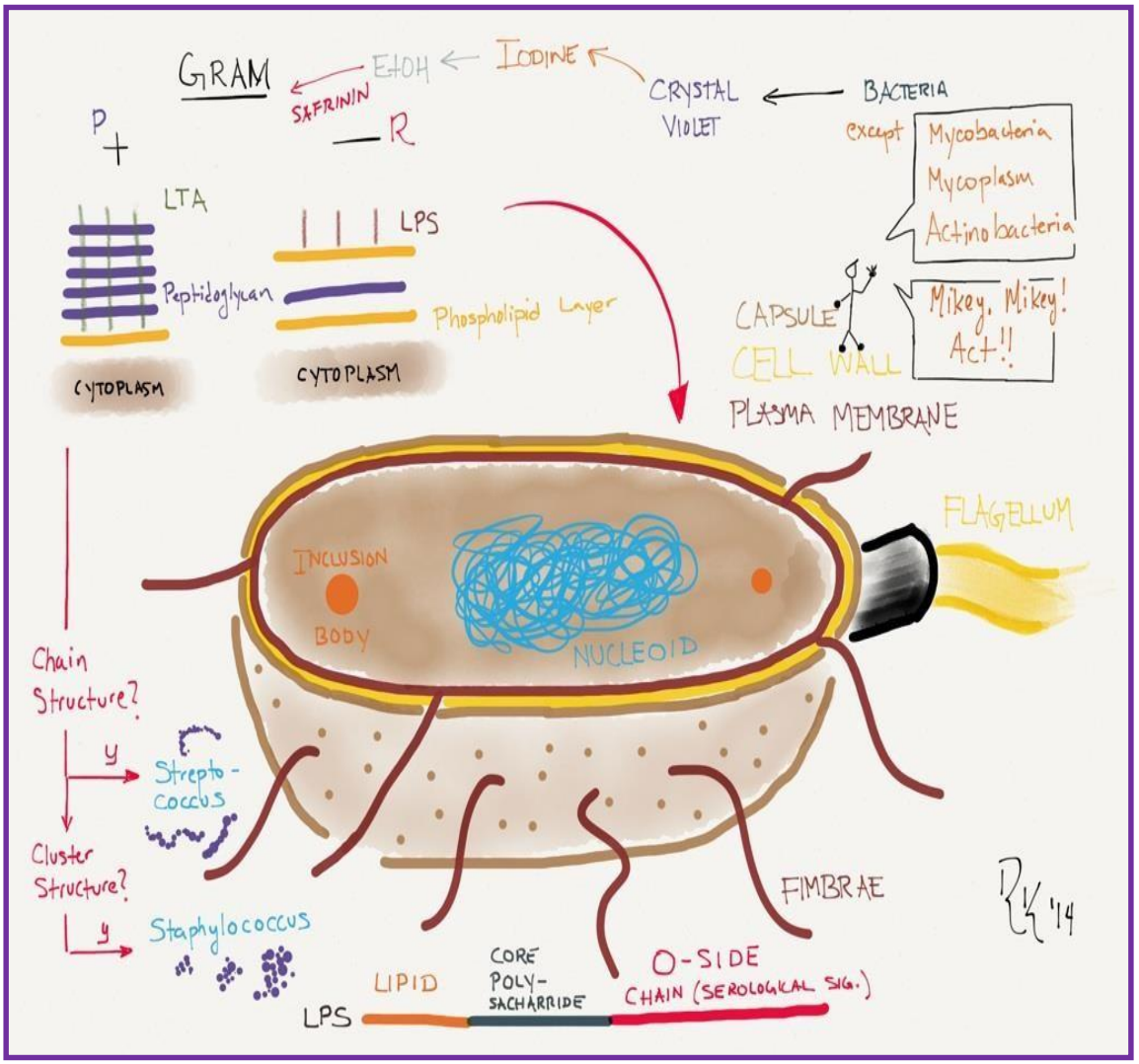
PHARAMACOLOGYpart1/PracticalSubjects

PRACTICAL Subject	Hours
General principles and definition	2
Drug form	2
Metrology	2
Dose calculation and dilution	2
Lab animal technique, handling, different dosing and sampling	2
Effect of ionization on absorption	2
Analysis of alanine	2
Effect of rout of administration on rate of absorption	2
Effect of autonomic drugs on isolated rabbit duodenum	2
Effect of autonomic drugs on eye	2
Effect of autonomic drug & hormones on isolated uterus from animals	2
Diuretics	2
Review and seminars	2
Examine	4

Total	**30**

Subject: GENERAL MICROBIOLOGY

THIRD Year | **FIRST Semester**



SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**5**	Hours	**4**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**30**	**45**
Practical	**10**	**15**
TOTAL	**40**	**60**

GENERALMICROBIOLOGY/Theoretical Subjects

THEORETICAL Subject	Hours
Introduction and History of Microbiology	4
Bacterial Cell Structure and Function	5
Sterilization and Disinfection	4
Bacterial Nutrition and Growth	4
Bacterial Classification	2
Antibiotics and Chemotherapeutic Agents	4
Bacterial Genetics	4
Bacterial Virulence	4
Normal Flora and Probiotics	2
Rickettsia and Chlamydia	4
Mycoplasma	4
Mycology	4
Total	**45**

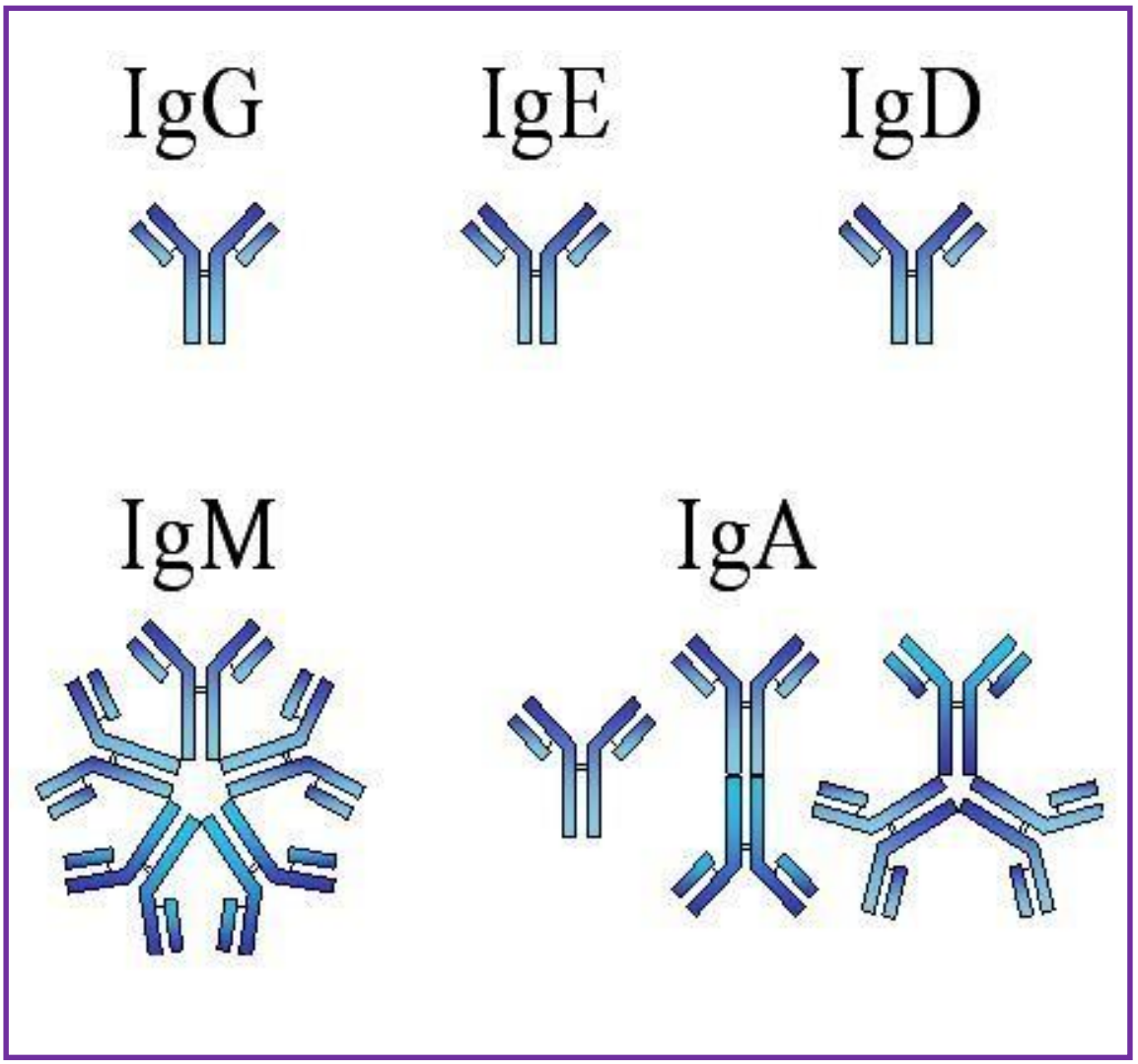
GENERALMICROBIOLOGY/PracticalS

PRACTICAL Subject	Hours
General Laboratory Instructions	2
Microscopes	2
Sterilization and Disinfection	2
Culture Media for Bacterial Growth	2
Bacterial Nutrition and Growth	2
Colony Morphology	2
Pure Culture Techniques	2
Bacterial Motility	2
Bacterial Morphology	2
Bacterial Staining Techniques	2
Bacterial Count	2
Antibiotics Tests	2
Biochemical Tests	2

Mycology	**4**
Total	**30**

Subject: IMMUNOLOGY

THIRD Year | **FIRST Semester**



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

IMMUNOLOGY/TheoreticalSubjects

THEORETICALSubject	Hours
Principleofimmunityandimmuneresponse(specificandnonspecific)	2
Immunoglobulin:Structure,variation,Functionandsynthesis	4
ImmunologyofTand Bcells	4
Complement:Nature,Functionandpathways	2
Cellmediatedimmunity,antigenrecognitionbyTcells	2
Immunologicaltolerance	2
TypesofHypersensitivity,Mechanisms	4
Auto-immunity	2
Transplantation	2
Principleofimmunegenetics	2
Immunoanaphylaxisreaction	2
Immunityofinfection	2
Total	**30**

3rd

IMMUNOLOGY/PracticalSubjects

PRACTICAL Subject	Hours
Introduction to immunology labs	2
Lab animals	2
Preservation of antigens and antibodies	4
Separation of immunoglobulin	2
Complement test	2
Precipitation test	2
Agglutination test	2
Neutralization test	2
Separation of lymphocytes from blood and lymph nodes	4
Preparation of antigens	4
Leukocytes	2
Phagocytosis	2
Total	**30**

Subject: GENERAL PATHOLOGY

THIRD Year | **FIRST Semester**

SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical	**3**	Hours	**2**	Units
TOTAL	**6**	Hours	**5**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**24**	**36**
Practical	**16**	**24**
TOTAL	**40**	**60**

GENERALPATHOLOGY/TheoreticalSubjects

THEORETICALSubject	Hours
Introduction	**1**
DegenerativechangesandNecrosis/AcuteCellularDegeneration/ GoutDegenerationandGangrenousnecrosis(Gangrenetypes).	**8**
DisturbanceofPigmentation(Jaundice/Typesandcausesandformationof hemosiderin,melanin,andcalcification/typesand causes)	**3**
Disturbance of growth (atrophy, hypertrophy, hyperplasia, hypoplasia,metaplasia,aplasia,congenitalanomalies)	**3**
DisturbanceofCirculation(Congestionandhemorrhage/typesand causes,thrombusandemboli:typesand causes,infarction,embolism,edema/ typesandcauses)	**6**
Inflammation(definition,causes,typesofinflammatorycells,types ofinflammation)	**8**
Healingandrepair	**2**
Inmmunopathology	**6**
Tumors(definition/theoriesoforigin,classification/differentiation betweenbenignandmalignanttumors/histologicalcharactersoftumors/ methodof transmission)	**8**
Total	**45**

GENERALPATHOLOGY/PracticalSubjects

PRACTICAL Subject	Hours
Solutions and fluids used in fixation and preservation of tissue samples used as preservative samples.	**6**
Methods of processing and preparation of tissue for microscopically examination.	**6**
Methods of embedding and preparation of tissue blocks.	**6**
Methods of cryostat for frozen sections.	**6**
Methods of reaction and special tissue stains.	**7**
Frozen section microtome for pathological detection of fat and enzymes.	**7**
Practical training in examination and diagnosis of many pathological conditions as histological section, lintin slides, digital photos and fixed samples (gallery samples).	**7**

Total	**45**

Subject: TOXICOLOGY

THIRD Year	FIRST Semester

SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical				
TOTAL	**2**	Hours	**2**	Units

MARK DETAILS

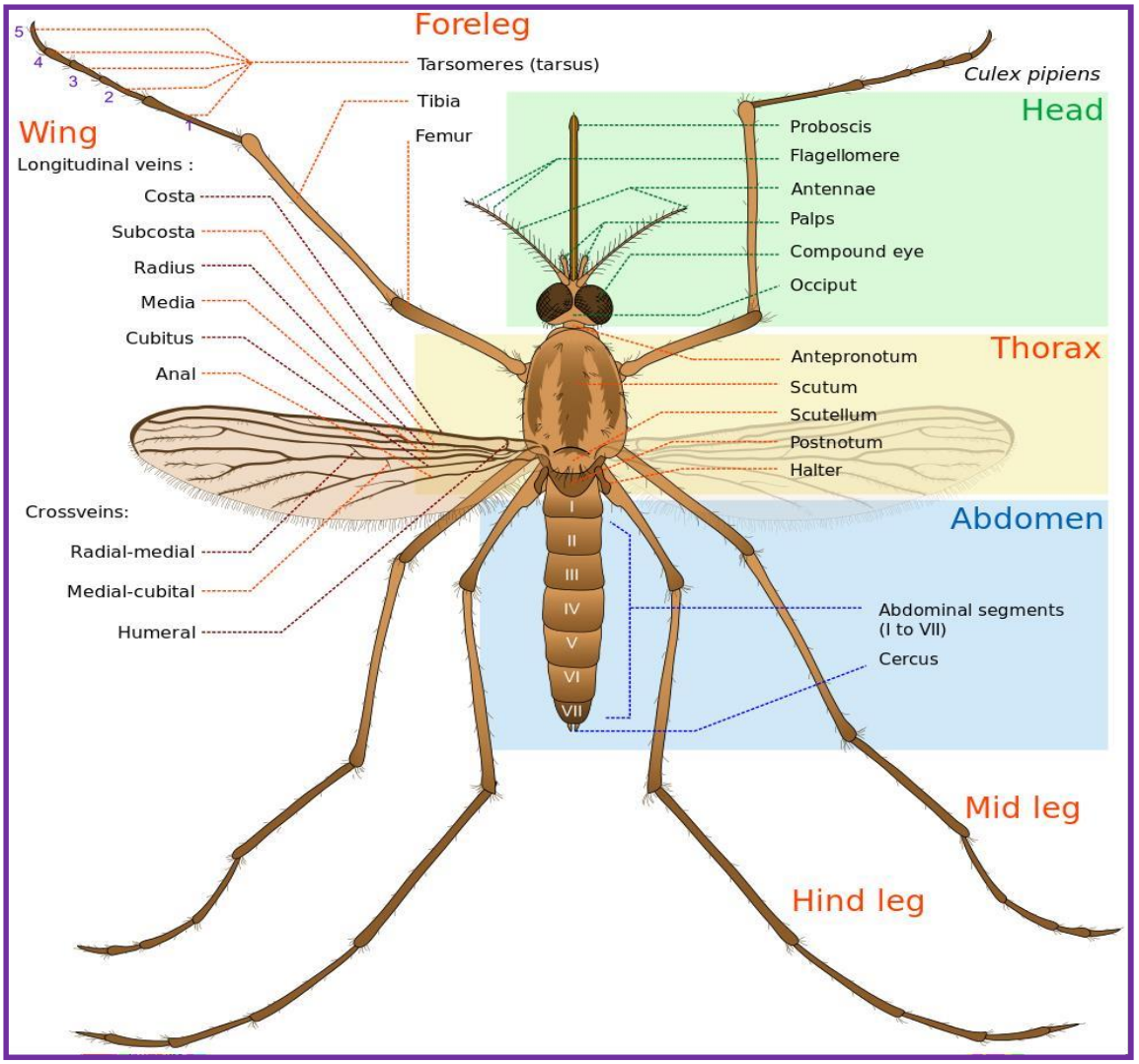
	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

TOXICOLOGY/TheoreticalSubjects

THEORETICALSubject	Hours
Concepts&terminologyoftoxicology	2
Toxicokinetics	2
Antidotesandgeneraltreatmentofpoisoning	2
Diagnosticaspectsoftoxicology	2
Insecticides	3
Herbicides	2
Toxicmetals	2
Mycotoxins	2
Feed-associatedtoxicants	2
House-hold&industrialproducts	2
Toxicplants	3
Biotoxins	2
Environmentalpollutionwithtoxicants	2
Pharmaceuticalspoisoning	2
Total	**30**

Subject: PROTOZOA AND ARTHROPODA

THIRD Year | **SECOND Semester**



SUBJECT CREDITS

Theoretical	**3** Hours	**3** Units
Practical	**2** Hours	**1** Units
TOTAL	**5** Hours	**4** Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**30**	**45**
Practical	**10**	**15**
TOTAL	**40**	**60**

PROTOZOAANDARTHROPODA/TheoreticalSubjects

THEORETICAL Subject	Hours
Phylum: Sarcomastigophora/**Families**: Trypanosomatidae, Trichomonadae, Plasmodiidae, Babesiidae, Theileriidae , Monocercomonadidae, Eimeriidae, Sarcocystidae, Cryptosporidiidae.	**30**
Phylum: Arthropoda / **Families**: Ioxdidae, Argasidae, Sarcoptidae, Psoroptidae, Tabanidae, Culicidae, Psychodidae,,Simuliidae, Oestridae, Calliphoridae, Anthomyidae, Cimicidae, Haematopinidae, Linognathidae, Superfamilies, Ischnocera, Amblycera	**15**
Total	**45**

PROTOZOAANDARTHROPODA/PracticalSubjects

PRACTICALSubject	Hours
Trypanosoma brucei, *T.equiperdium*, *T.evansi*, *T.cruzi*, Leishmania(Amastigete), *Trichomonas vaginalis*, *Entamoeba histolytica*(trophozoite)	**4**
Eimeria(lifecycle),Sarcocystis,*Toxoplasmagondii*,Cryptosporidium	**4**
Plasmodiumgallinaceum,Babesiacanis,B. motasi	**4**
Theileria,Anaplasma,Hardticks,Hyalomma,Rhipicephalus,Boophilus, larva,Softtick(*Argas persicus*)	**4**
Demodexfolliculorum,Dermanyssusgallinae,Psorptes,Sarcoptes	**4**
Menacanthus straminus, Haematopinus suis, Ctenocephalides canis, Xenopsyllacheopis,Cimexlectularis	**4**
Anopheles,Culex,(male+female)pupaandlarva,Simuliumadultand Larva	**4**
Oesteridae,*Oestrusovis,Hypodermabovis,Gastrophilusintestinalis*	**2**

Subject: PHARMACOLOGY / PART 2

THIRD Year | **SECOND Semester**

SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**5**	Hours	**4**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**30**	**45**
Practical	**10**	**15**
TOTAL	**40**	**60**

PHARAMACOLOGYpart2/TheoreticalSubjects

THEORETICAL Subject	Hours
Antibacterial drugs	9
Antifungal drugs	2
Antiviral drugs	2
Antineoplastic drugs	2
Antinematodal, Anticestodal and Antiprotozoan	5
Dermatopharmacology, Ectoparasiticides.	3
Antiseptics and Disinfectants	3
Endocrine pharmacology	5
Autocoids and anti-inflammatory	5
Metabolic therapy	3
Growth promoter	3
Herbal medicine	3
Total	**45**

PHARAMACOLOGYpart2/PracticalSubjects

PRACTICAL Subject	Hours
Nature and source of drugs	2
Writing of prescription	2
Pharmaceutical preparation for farm animals and poultry	2
Despising of drugs lotion and solution	2
Despising of drugs ointment and cream	2
Despising of drugs antacid and laminate	2
Analgesic	2
Log dose response relationships (ED_{50} , LD_{50}, TI)	2
Sensitivity test of antibiotic	2
Organophosphate poisoning in rats or mice	2
Determination of blood cholinesterase activity	2
Cyanide poisoning	2

Aspirin toxicity (comparison with acetaminophen)	**2**
Review and seminars	**2**
Examine	**2**
Total	**30**

Subject: VETERINARY CLINIC part 1

THIRD Year	SECOND Semester

SUBJECT CREDITS

Theoretical		
Practical	**2** Hours	**1** Units
TOTAL	**2** Hours	**1** Units

MARK DETAILS

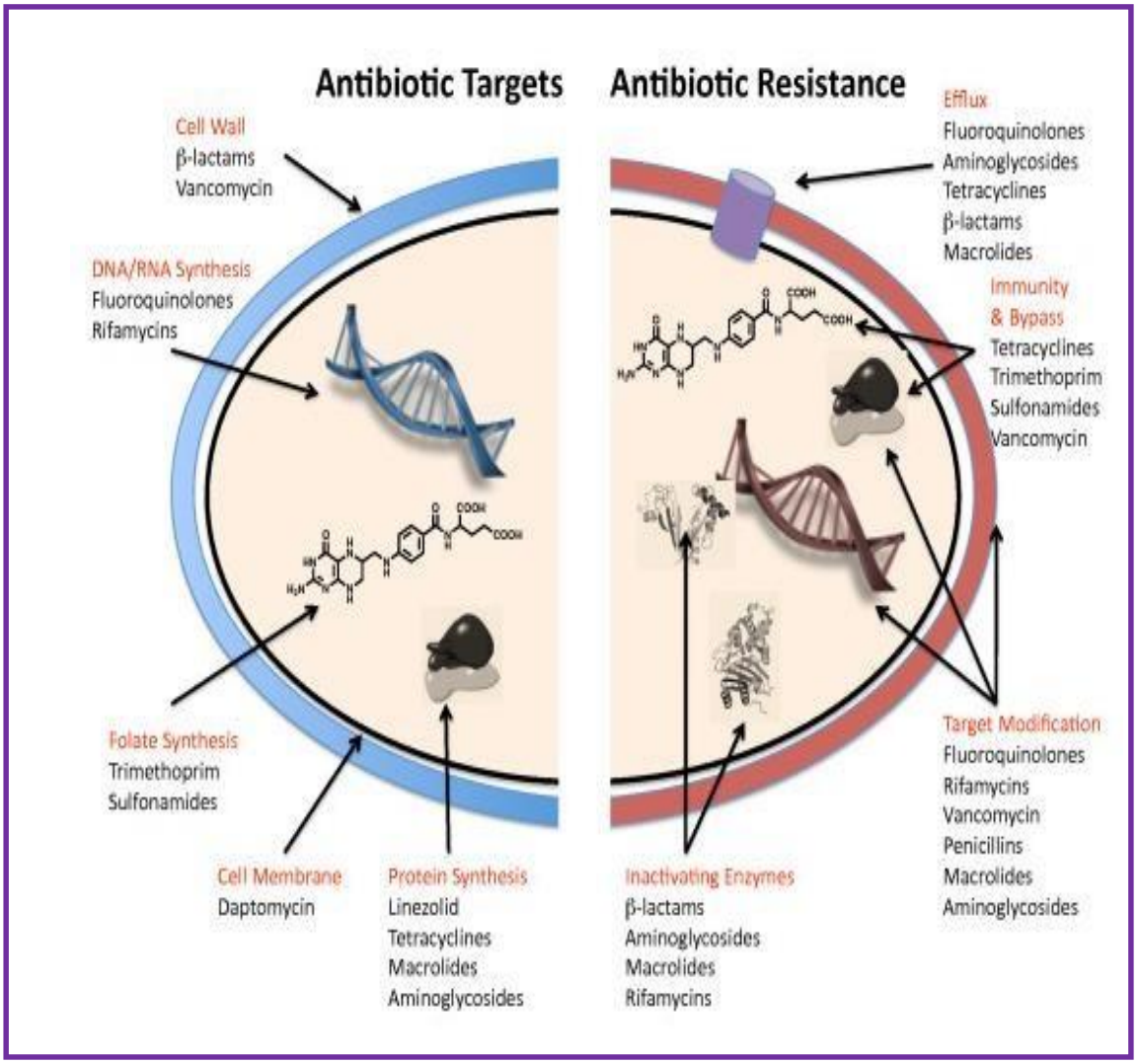
	Course Exam Marks	Final Exam Marks
Theoretical	**-**	**-**
Practical	**40**	**60**
TOTAL	**40**	**60**

VETERINARY CLINICpart1/TheoreticalSubjects

THEORETICALSubject	Hours
Introduction	2
Inspection,Palpation,PercussionandAuscultation	2
ExaminationofBodyTemperature	2
ExaminationofArterialPulse	2
ExaminationofRespiration	2
ExaminationofLymphnod	2
ExaminationofMucousmembranes	2
ExaminationofRespiratorySystem	2
ExaminationofCardiovascularSystem:Heart,Jugularvein	2
ExaminationofDigestiveSystem:Rumen,Liver,Painreflex	2
ExaminationofUrinarySystem	2
ExaminationofSkin	2
ExaminationofReproductiveSystem(Udder+GenitalSystem)	2
RouteofAdministrationofDrugs	2
AllergicTests(DiagnosticTests)andRevising	2
Total	**30**

Subject: SPECIAL MICROBIOLOGY

THIRD Year | **SECOND Semester**



SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**5**	Hours	**4**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**30**	**45**
Practical	**10**	**15**
TOTAL	**40**	**60**

SPECIALMICROBIOLOGY/TheoreticalSubjects

THEORETICALSubject	Hours
Staphylococcus	3
Streptococcus	3
Corynebacterium	2
Listeria	1
Bacillus	2
Clostridium	6
ActinomycesandNocardia	2
Actionbacillus	1
Pasteurella	2
Haemophillus	1
Moraxellaandbordetlla	2
Pseudomonas(Burkholderia)	2
Leptospira	1
Campylobacter	2
Brucella	3
Spharophorus	1
Enterbacteriacae	8
Mycobacterium	3
Total	**45**

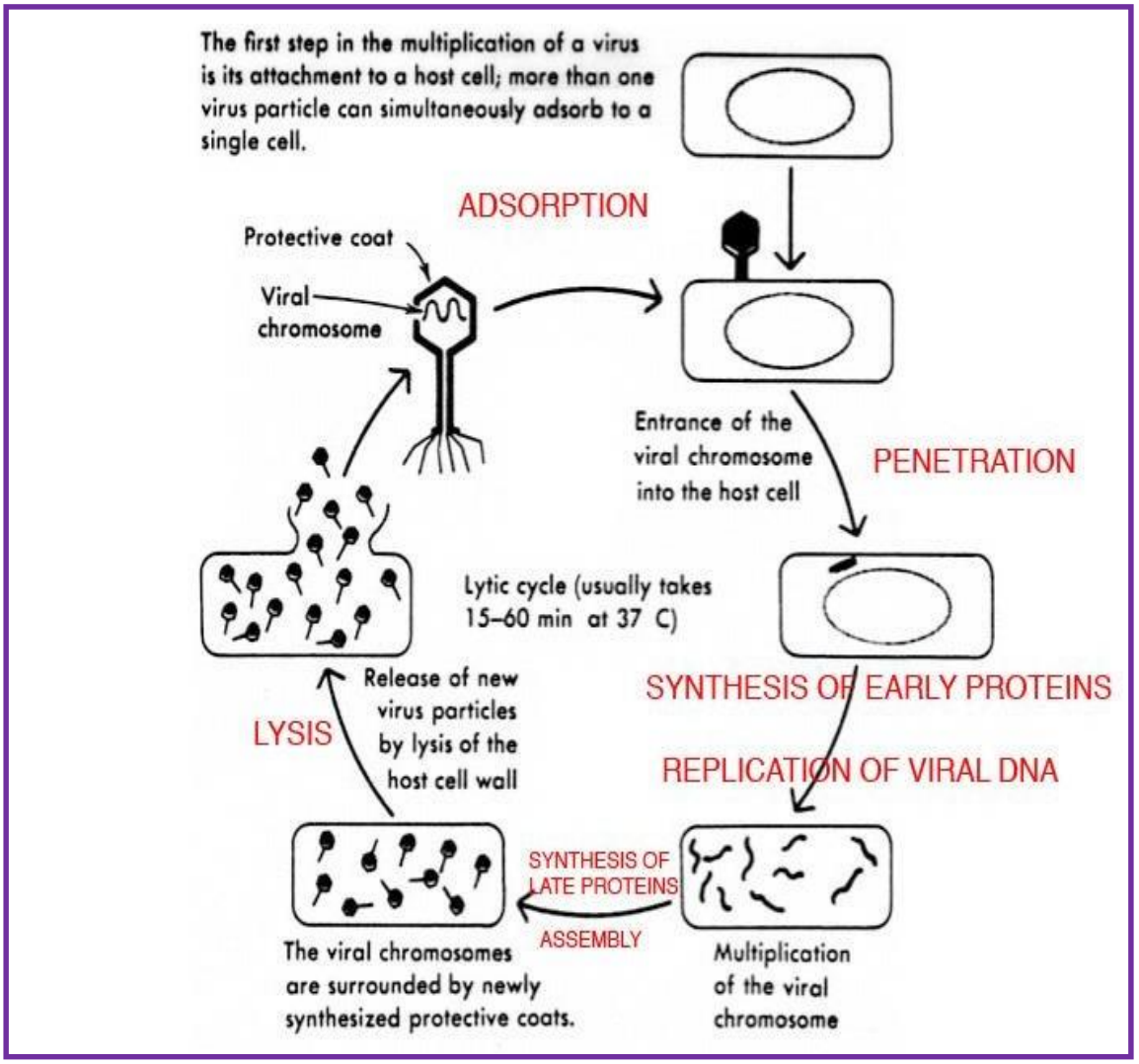
SPECIALMICROBIOLOGY/PracticalSubjects

PRACTICAL Subject	Hours
Staphylococcus	2
Streptococcus	2
Corynebacterium	4
Rhodococcus, Listeria	2
Bacillus	2
Clostridium and Anaerobic Condition	4
Mycobacterium	2
Pasteurella	2
Pseudomonas (Burkholderia)	2
Leptospira	2
Brucella	2
Enterbacteriacae	4

Total	**30**

Subject:VIROLOGY

THIRD Year | **SECOND Semester**



SUBJECT CREDITS

Theoretical	**2** Hours	**2** Units
Practical	**2** Hours	**1** Units
TOTAL	**4** Hours	**3** Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

VIROLOGY/TheoreticalSubjects

THEORETICALSubject	Hours
IntroductionandDiscoveringofViruses	1
GeneralCharacteristicsofViruses,NatureandStructure	1
MorphologyandChemistryofViruses	2
VirusClassificationandTaxonomy	1
VirusMultiplicationandPropagation(replication)	3
ViralgeneticsandInteractionBetweenViruses	2
InterferonandViralInterference	1
ViralVaccinesandAntiviralDrugs	2
Bacteriophages	1
EffectofPhysicalandChemicalAgentsonViruses	1
LaboratoryDiagnosisofViralInfection	2
PicornavirusandCaliciviridae	2
Orthomyxoviridae	2
ParamyxoviridaeandRetroviridae	2
ReoviridaeandBirnaviridae	1
RhabdoviridiaeandBornaviridae	1
BunyaviridaeandCoronaviridae	1
Poxviridae,Herpesviridae	2
AdenoviridaeandParvoviridae	1
PapovaviridaeandPapillomaviridae	1
Total	**30**

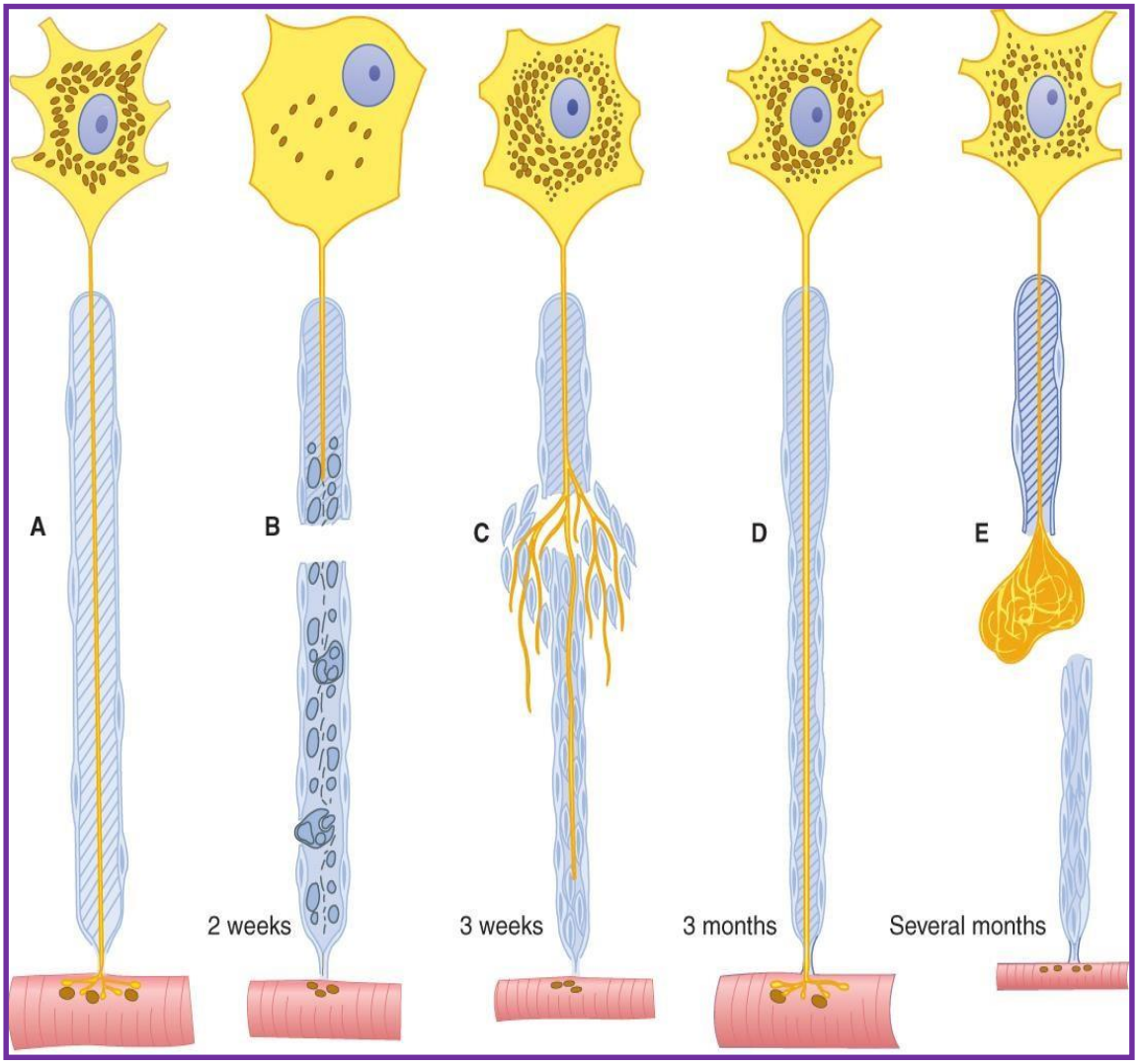
VIROLOGY/PracticalSubjects

PRACTICAL Subject	Hours
Collection and Preservation of Viral Samples	2
Isolation and Preservation of Viruses	4
Propagation of Viruses in Egg Embryo	4
Propagation of Viruses in Tissue Culture	6
Haemagglutination Test of ND Virus	2
Haemagglutination Inhibition Test of ND Virus	2
Neutralization Test for ND Virus	2
Methods of Virus Titration	4
Physical Character of Viruses	2
Chemical Character of Viruses	2

Total	**30**

Subject: SYSTEMIC PATHOLOGY

THIRD Year | **SECOND Semester**



SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical	**3**	Hours	**2**	Units
TOTAL	**6**	Hours	**5**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**24**	**36**
Practical	**16**	**24**
TOTAL	**40**	**60**

SYSTEMICPATHOLOGY/TheoreticalSubjects

THEORETICAL Subject	Hours
Diseases of Respiratory system/ Upper respiratory tract/ Lung/ Pleura	6
Diseases of Cardiovascular system	5
Diseases of haemopoetic and lymphatic tissues	3
Diseases of digestive system	8
Disease of urinary system	4
Disease of Male and Female genital system	3
Diseases of Muscol- Skeletal system	4
Diseases of Nervous system	3
Disease of Endocrine	3
Diseases of skin and accessory	3
Diseases of eye and special organ	3
Total	**45**

SYSTEMICPATHOLOGY/PracticalSubjects

PRACTICAL Subject	Hours
Histopathological practice for examining of upper respiratory tract .	5
Histological section and fixed gross samples of endocarditis and myocarditis and pericarditis caused by bacteria and parasites.	5
Pathological affections of aorta and other blood vessels (gross and histopathological section)	5
Pathological affection of digestive system including gingivitis and other mucosal epithelial affection (foot and mouth diseases, and wooden tongue).	5
Gastroenteritis, parasitic affection of stomach, intestinal obstruction, coccidiosis (gross and histopathological practice).	5
Liver necrosis, liver cirrhosis, abscess, parasitic infection of liver and bile duct and gill bladder. Microscopic slides of pathological infection of kidney urethras and urinary bladder. Hematueria in farm animals.	4
Microscopic slides of metritis and salphangitis, suppurative metritis,	8

mastitis testis and urinary tract	
Microscopic slides of bone infection, and cartridge, joints, osteomalaysia, vitamin D deficiency, skin infection, myocytic and parasitic infection of skin.	**4**
Microscopic slides from general diseases cases.	**4**
Total	**45**

Curriculum Summary for Third Year Subject / First semester

No.	Subjects	Credits	Theoretical	Practical	Total
1	Helminthology	Units	3	1	4
		Hours	3	2	5
2	Pharmacology / part 1	Units	3	1	4
		Hours	3	2	5
3	General microbiology	Units	3	1	4
		Hours	3	2	5
4	Immunology	Units	2	1	3
		Hours	2	2	4
5	General pathology	Units	3	2	5
		Hours	3	3	6
6	Toxicology	Units	2	-	2
		Hours	2	-	2

Total Subjects: 6 Total Units: 22 Total Hours: 27

Curriculum Summary for Third Year Subject / Second semester

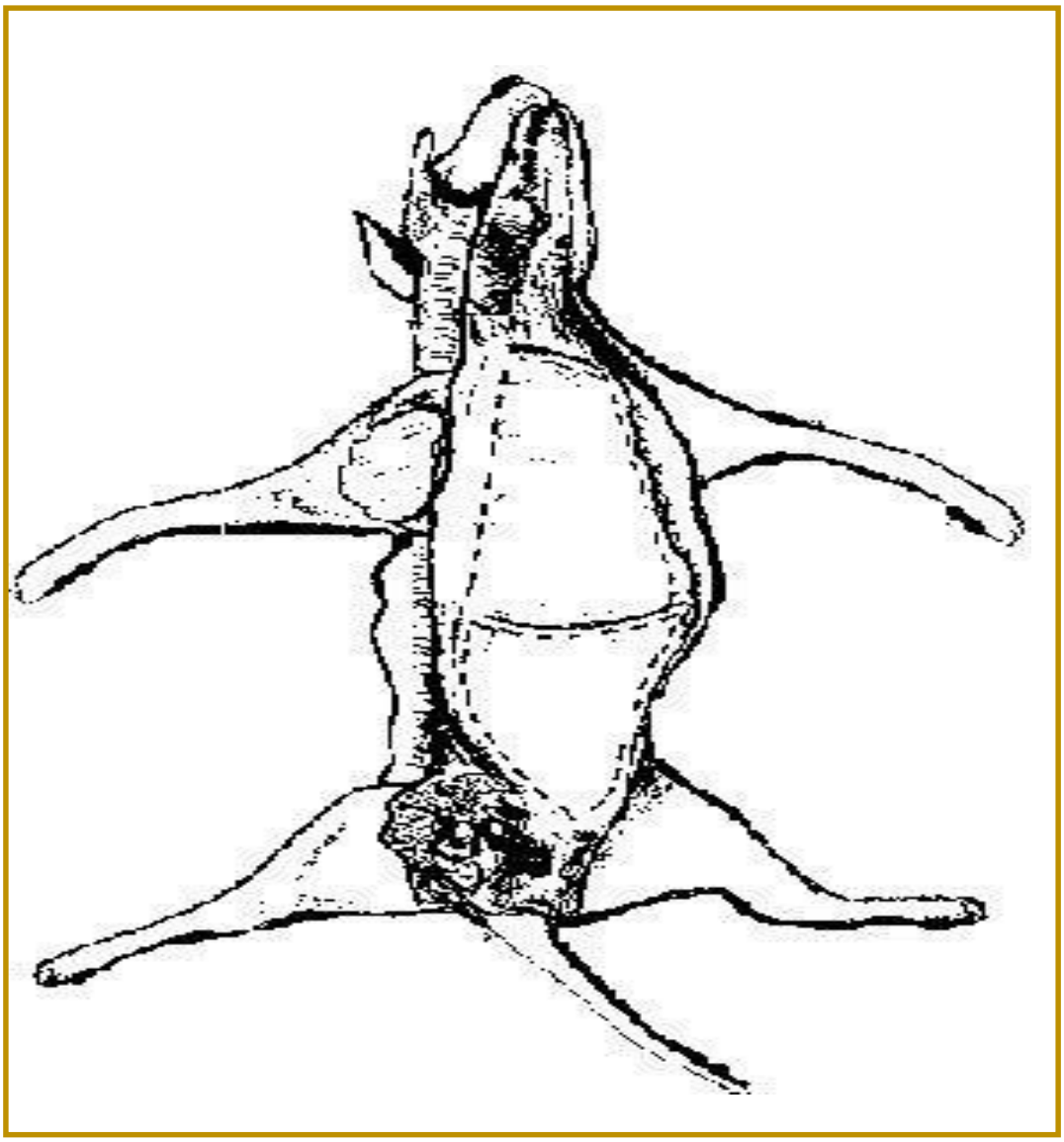
No.	Subjects	Credits	Theoretical	Practical	Total
1	Protozoa and Arthropoda	Units	3	1	4
		Hours	3	2	5
2	Pharmacology / part 2	Units	3	1	4
		Hours	3	2	5
3	Veterinary Clinic / part 1	Units	-	1	1
		Hours	-	2	2
4	Special microbiology	Units	3	1	4
		Hours	3	2	5
5	Virology	Units	2	1	3
		Hours	2	2	4
6	Systemic pathology	Units	3	2	5
		Hours	3	3	6

Total Subjects: 6 Total Units: 21 Total Hours: 27


1
SYLLABUS OF FIRST YEAR
2
SYLLABUS OF SECOND YEAR
3
SYLLABUS OF THIRD YEAR
4
SYLLABUS OF FOURTH YEAR
5
SYLLABUS OF FIFTH YEAR

Subject: MORBID ANATOMY / PART 1

FOURTH Year | **FIRST Semester**



SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**3**	Hours	**2**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**20**	**30**
Practical	**20**	**30**
TOTAL	**40**	**60**

MORBIDANATOMY part1/TheoreticalSubjects

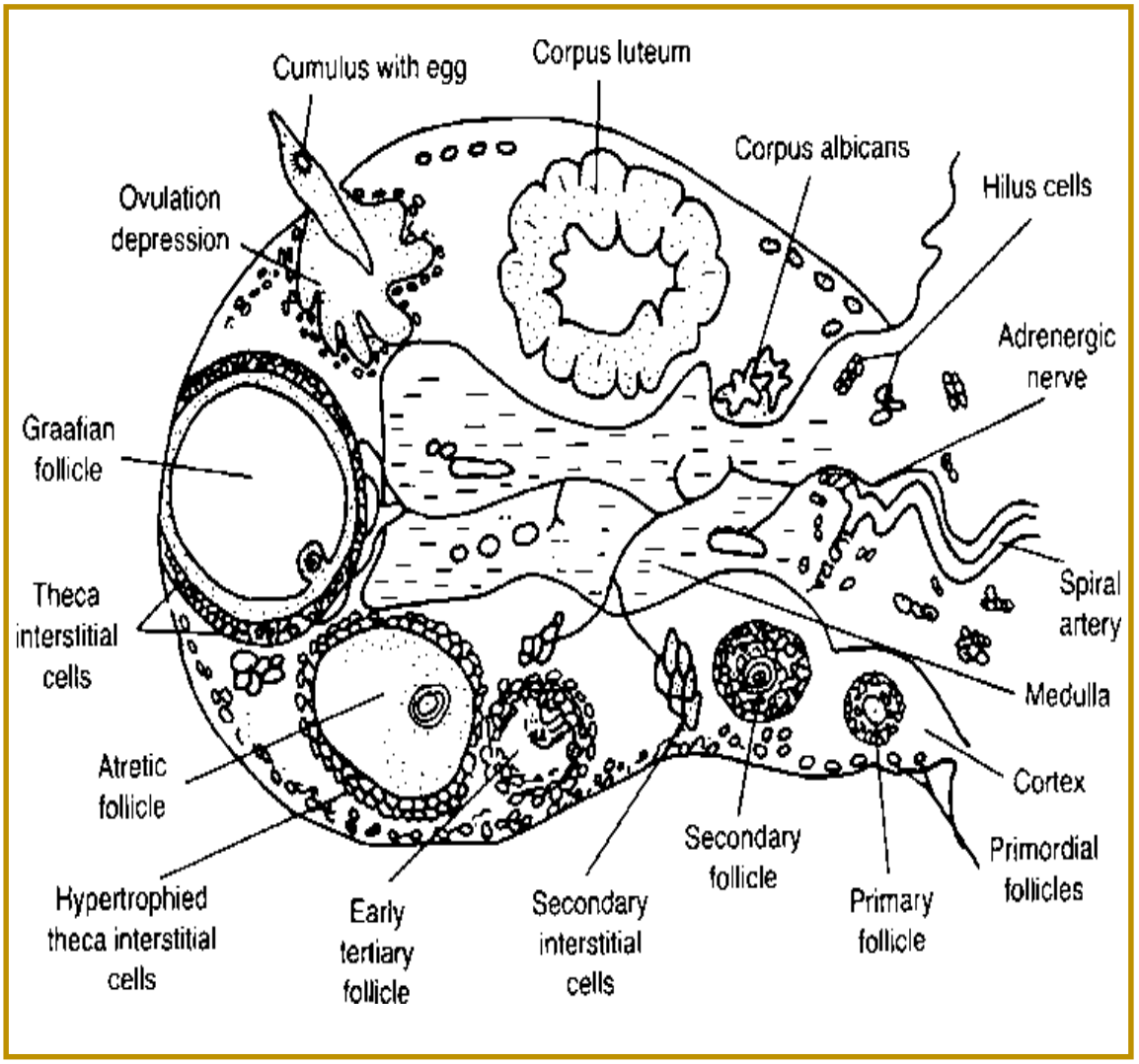
THEORETICAL Subject	Hours
Bovine diseases: Tuberculosis, Leptospirosis, Contagious bovine pleuro pneumonia, Colibacillosis, Shipping fever, Cattle plague, Bovine malignant catarrhal, Foot and mouth disease, Bovine viral diarrhea, Actinobacillosis, Actinomycosis, Theileriosis, Anaplasmosis, Babesiosis, Lumpy skin disease	**9**
Ovine disease: contagious ecthyma, Sheep pox, Foot root, Black leg, Lamb dysentery, Anthrax, Listeriosis, Enterotoxaemia, Black disease	**6**
Total	**15**

MORBIDANATOMYpart 1/ PracticalSubjects

PRACTICALSubject	Hours
Introduction&P.Mreport	**4**
Postmortemtechniqueforlargeanimals	**4**
PMtechniqueforlabanimals	**4**
DatashowofBovinediseases: Tuberculosis, Leptospirosis, Contagious bovine pleuro pneumonia,Colibacillosis,Shippingfever,Cattleplague,Bovinemalignantcatarrhal,Footandmouthdisease,Bovineviraldiarrhea, Actinobacillosis,Actinomycosis,Theileriosis,Anaplasmosis,Babesiosis, Lumpyskindisease	**12**
DatashowofOvinedisease: contagious ecthyma, Sheep pox, Foot root, Black leg, Lambdysentery,Anthrax,Listeriosis,Enterotoxaemia,Blackdisease	**6**
Total	**30**

Subject:FEMALEFERTILITYandGENITALDISEASES

FOURTH Year | **FIRST Semester**



SUBJECT CREDITS

Theoretical	**2** Hours	**2** Units
Practical	**2** Hours	**1** Units
TOTAL	**4** Hours	**3** Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

FEMALEFERTILITYandDISEASES/TheoreticalSubjects

THEORETICAL Subject	Hours
Female puberty and maturity	1
Physiology of the female reproductive system	2
Female reproductive hormones	2
Estrus cycle	2
Seasonality	1
Ovulation	1
Luteolysis	1
Infertility and sterility	6
Reproduction in buffalo cows	4
Reproduction in mares	4
Reproduction in she camels	2
Reproduction in ewes and does	2
Reproduction in bitch and queen	2
Total	**30**

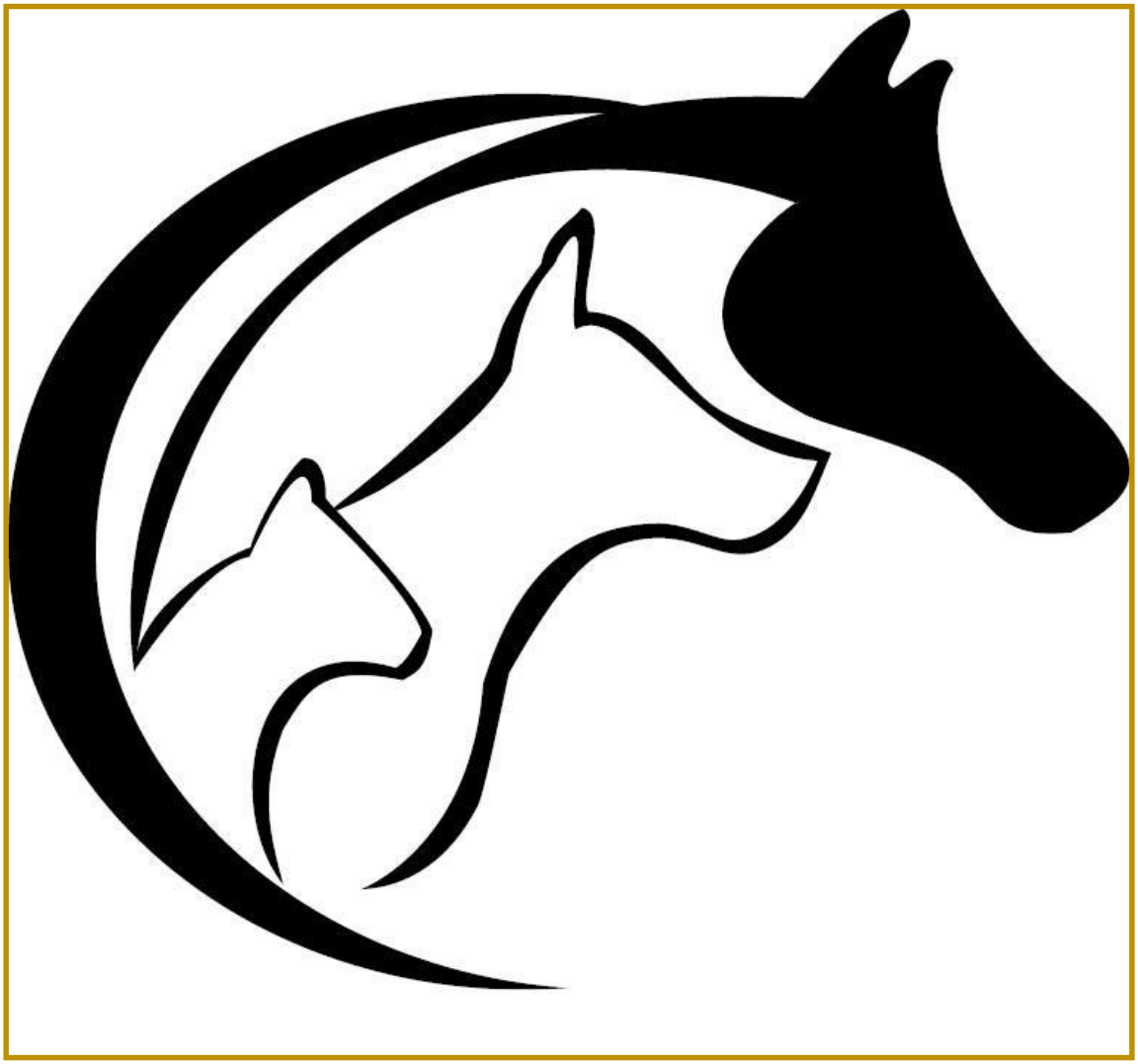
FEMALEFERTILITYandDISEASES/PracticalSubjects

PRACTICAL Subject	Hours
Anatomy of the female reproductive system	2
Estrus signs and detection	4
Vaginal examination	2
Rectal palpation	6
Clinical uses of hormones	2
Female infertility and sterility	6
Abnormalities of the female reproductive system	2
Intrauterine therapy	2
Reproductive performance	2
Records	2

Total	**30**

Subject: VETERINARY CLINIC / PART 2

FOURTH Year	FIRST Semester



SUBJECT CREDITS

Theoretical		
Practical	**4** Hours	**2** Units
TOTAL	**4** Hours	**2** Units

MARK DETAILS

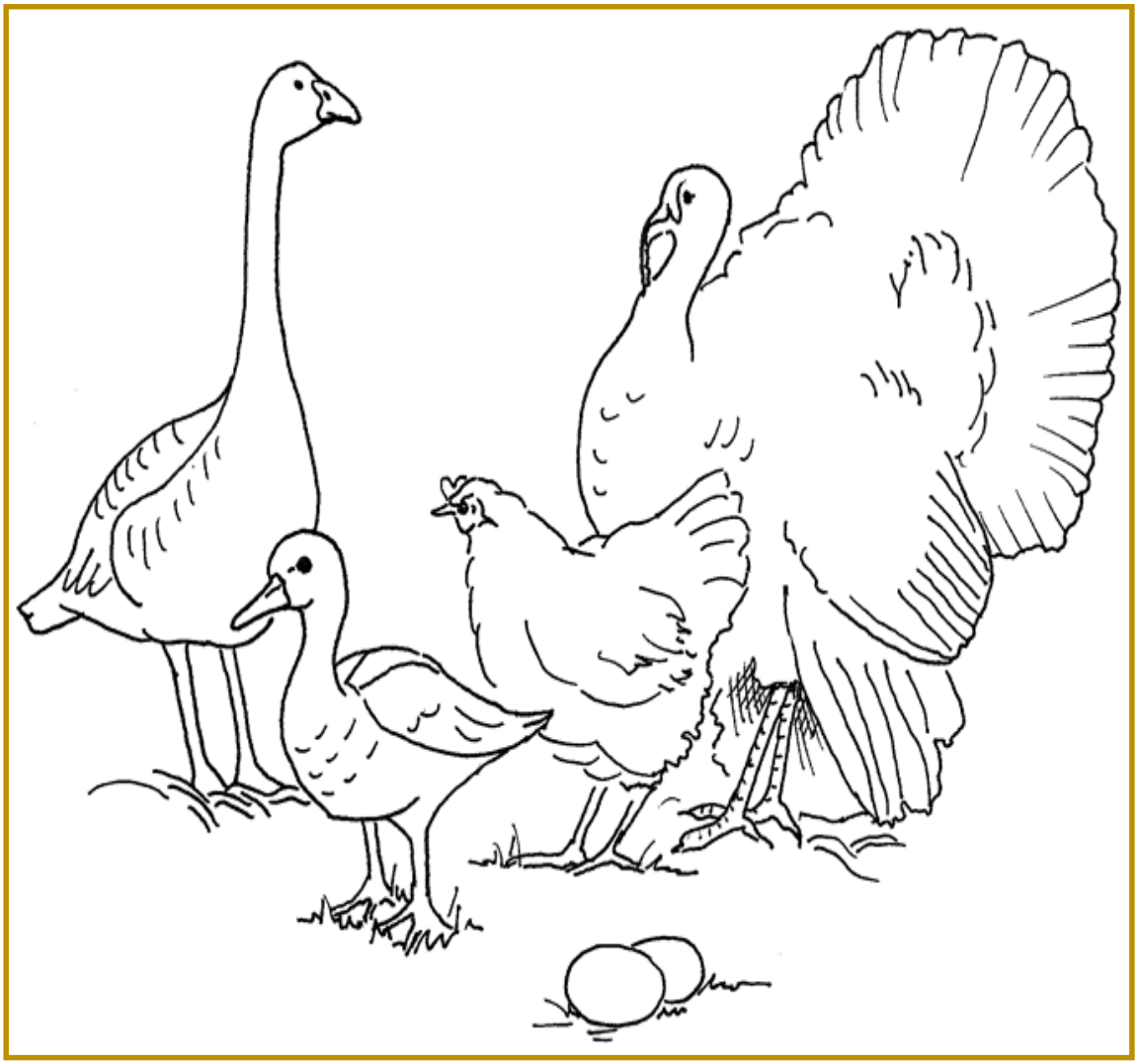
	Course Exam Marks	Final Exam Marks
Theoretical	**-**	**-**
Practical	**40**	**60**
TOTAL	**40**	**60**

VETERINARYCLINICPART1 /PracticalSubjects

PRACTICALSubject	Hours
Examinationofanimals,diagnosisandtreatmentofSurgerycases receivebyVeterinaryTeachingHospitalorfieldvisits.	10
Examinationofanimals,diagnosisandtreatmentofObstetriccases receivebyVeterinaryTeachingHospitalorfieldvisits.	10
Examinationofanimals,diagnosisandtreatmentofPoultrydiseases receivebyVeterinaryTeachingHospitalorfieldvisits.	10
Examinationofanimals,diagnosisandtreatmentofFishdiseases receivebyVeterinaryTeachingHospitalorfieldvisits.	10
Examinationofanimals,diagnosisandtreatmentofInternalMedicine diseasesreceivebyVeterinaryTeachingHospitalorfieldvisits.	10
Examination of animals, diagnosis and treatment of Clinical Pathologicalcasesreceivebyveterinaryteachinghospitalorfieldvisits.	10
Total	**60**

Subject: POULTRY DISEASES / PART 1

FOURTH Year | **FIRST Semester**



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

POULTRYDISEASESpart1/TheoreticalSubjects

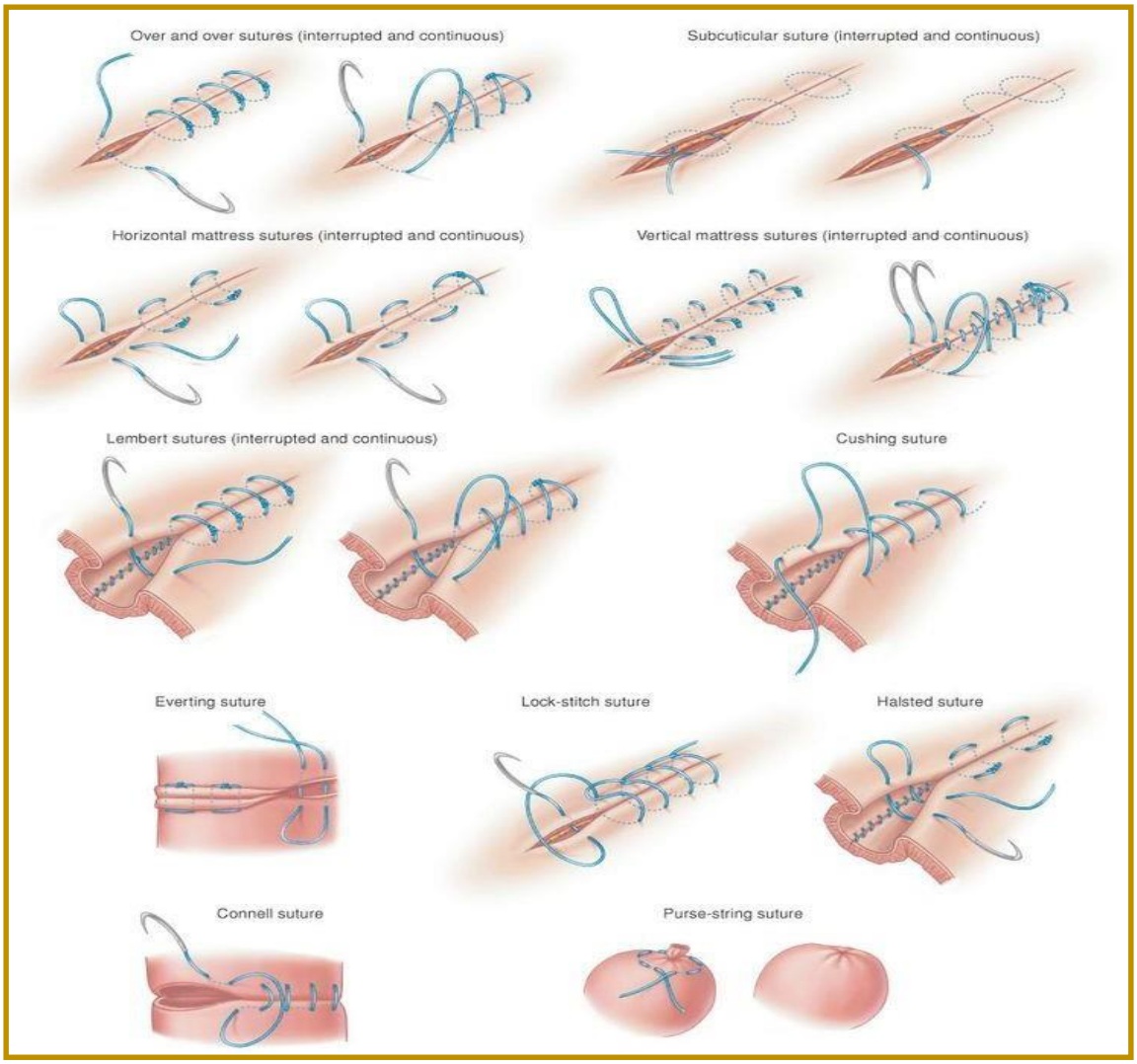
THEORETICAL Subject	Hours
Introduction about diseases and poultry industry	4
Bacterial diseases	10
Mycoplasma and Chlamydia diseases	6
Viral diseases	10
Total	**30**

POULTRYDISEASESpart1/PracticalSubjects

PRACTICALSubject	Hours
Introductionaboutpoultryindustryinrelationtodiseases	2
managementofpoultryhouseandtheireffectedondiseases	2
Methodforkillingchickenspreparedforpostmortem	2
Learningstudentabouthowtowritecasereport	2
Comparativeanatomyofbird (grosslesionsandsamplescollection)	2
E.coliinfection	2
DiseasescausedbySalmonella	2
Coryza/fowlcholeraandspirochetosis	2
Necroticandulcerativeenteritis	2
Mycoplasmadiseases	2
Newcastle,Maerksdisease,leukosis,avianencephalomyelitis	2
IB,IBD,IH,ILT	2
Avianpox,Stuntingsyndrome,EDS,HHS	2
Introductionaboutpoultryindustryinrelationtodiseases	2
Requirementofmanagementofhouseandtheireffectedondiseases	2
Total	**30**

Subject: SURGERY / PART 1

FOURTH Year | **FIRST Semester**



SUBJECT CREDITS

Theoretical	**3** Hours	**3** Units
Practical	**2** Hours	**1** Units
TOTAL	**5** Hours	**4** Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**30**	**45**
Practical	**10**	**15**
TOTAL	**40**	**60**

SURGERYpart1/Theoretical Subjects

THEORETICALSubject	Hours
IntroductionandclassificationofSurgery	3
Sterilization	2
Responsetotrauma	2
Woundclassification	2
Heamastasis	2
Abscess	2
Ulcer	2
Tumors	2
Hernia	1
Gagarin	2
Inflammation	2
Affectionofthebursa,joints	3
Affectionoftendon	2
Introductionofanesthesiaandhistory	3
Classificationofanesthesia	3
Stage ofanesthesia	3
Routofadministration	1
General anestheticagents	3
Localanesthesia	5
Total	**45**

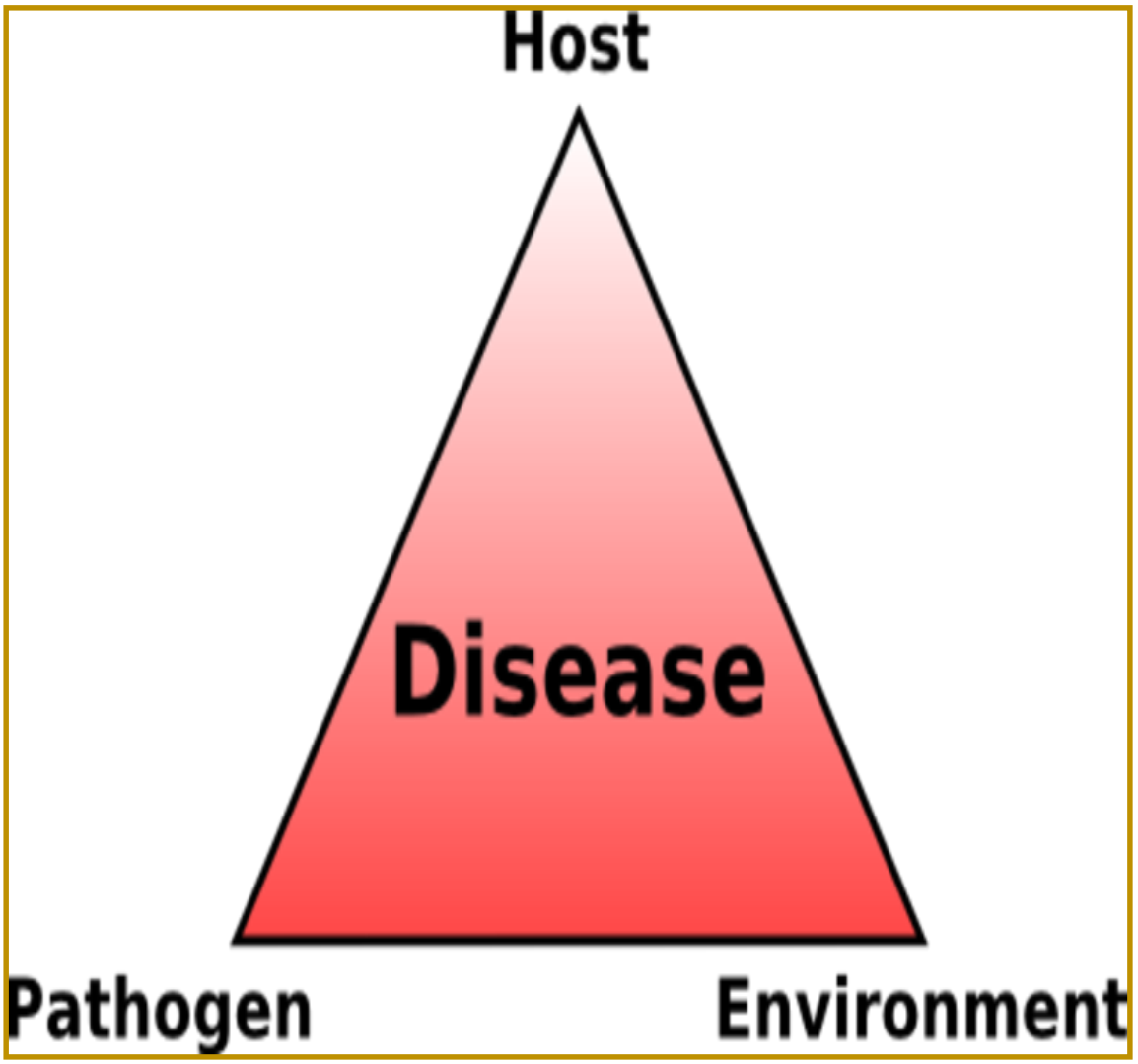
4th

SURGERYpart1/PracticalSubjects

PRACTICAL Subject	Hours
Introduction to surgical theater	4
Instrumentation	4
Preparation of surgical packs	4
Preoperative examination	4
Sutures and ligatures	4
Local anesthesia	4
Regional anesthesia	4
Examination	2
Total	**30**

Subject:INFECTIOUS&EPIDEMIOLOGICAL DISEASES/PART1

FOURTH Year	FIRST Semester



SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical				
TOTAL	**3**	Hours	**3**	Units

MARK DETAILS

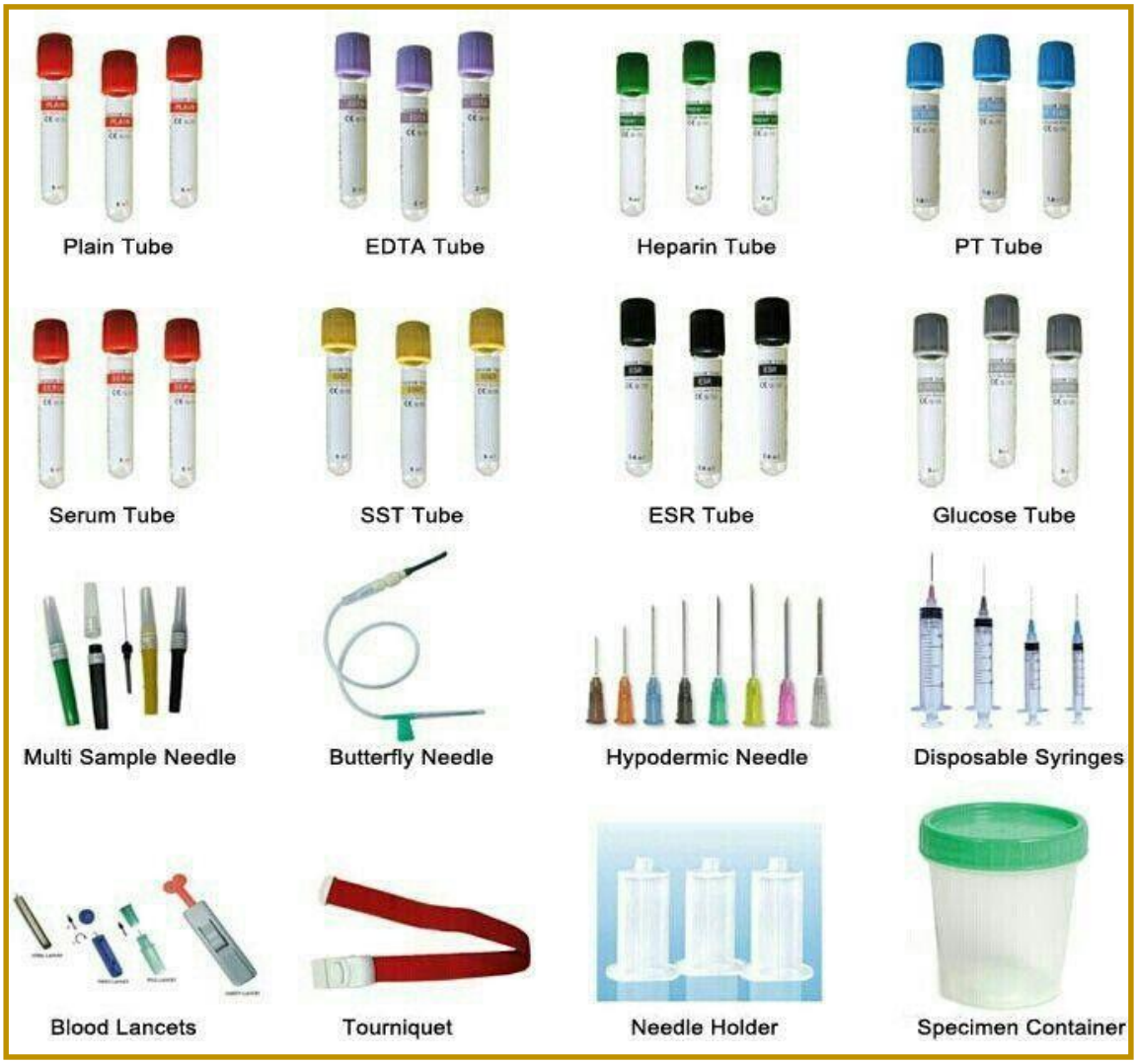
	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

INFECTIOUS&EPIDEMIOLOGICALDISEASES part1/ TheoreticalSubjects

THEORETICALSubject	Hours
Enzooticabortioninsheep	2
Glanders	2
Epizooticlymphangitis	2
Strangles	2
Contagiousbovinepyelonephritis	2
Caseouslymphadenitisofsheep	2
Ulcerativelymphangitis	2
Brucellosis	2
Listerosis	2
Leptospirosis	2
Anthrax	2
Salmonllosis	2
Colibacillosis	2
FootrotandMastitis	2
CCPPandCBPP	2
TBandjohn'sdisease.	2
ActinomycosisandActinobacillosis	2
Oralandlaryngealnecrobacillosis	1
Winterdysenteryofcattle	1
DiseasescausedbyHemophilusandMoraxellaspp	1
PasteurellosisandHS	1
Black leg	1
Blackdisease	1
Tetanus	1
Enterotoxaemia	1
Botulism	1
Bacillaryhemoglobinuria	1
Braxy	1
Total	**45**

Subject: CLINICAL PATHOLOGY / PART 1

FOURTH Year | **FIRST Semester**



SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**3**	Hours	**2**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**20**	**30**
Practical	**20**	**30**
TOTAL	**40**	**60**

CLINICALPATHOLOGYpart1 /TheoreticalSubjects

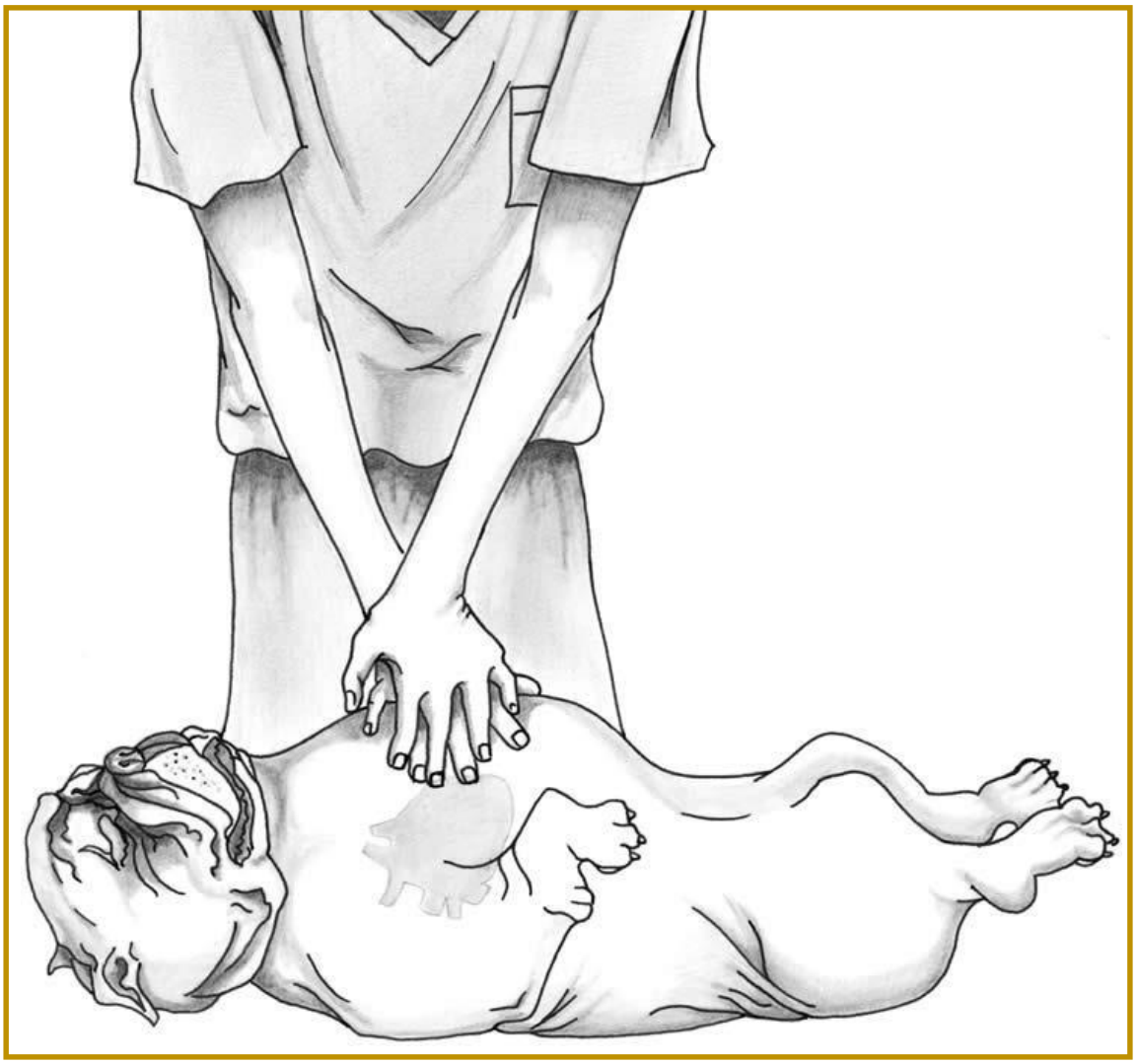
THEORETICAL Subject	Hours
Introduction (terminology and concepts)	2
Clinical haematology (leukocytes and erythrocytes)	2
Bone marrow examination	1
Platelets function abnormalities & diagnosis of bleeding disorders	1
Clinical biochemistry, Basic principles, total portion,	1
Ketones, urea, enzymology, mineral levels.	1
Metabolic profile testing and S.1. unit.	1
Liver function test	2
Kidney function test	2
Water electrolytes and acid - base imbalance	1
Disturbances of adrenal, pituitary, thyroid and parathyroid glands	1
Total	**15**

CLINICALPATHOLOGYpart1 /PracticalSubjects

PRACTICALSubject	Hours
Collectionofdifferentsamples.	2
Erythrocytescount	2
Reticulocytescount	2
PackedcellvolumeandHbdetermination	2
Leukocytesparameters(TLC)	2
Leukocytesparameters(DLC)	2
ESRdetermination	2
Plateletsfunctionabnormalities	2
Bleedingandclottingtime	2
Bloodsmearexamination	2
Lymphsmearexamination	2
Clinicalbiochemistry, Totalprotein,Ketonesandurea.	4
Enzymologyandminerallevels.	2
Urineexamination(physical,chemicalandmicroscopic)	2
Total	**30**

Subject:INTERNALMEDICINE/PART1

FOURTH Year	FIRST Semester



SUBJECT CREDITS

Theoretical	**3** Hours	**3** Units
Practical		
TOTAL	**3** Hours	**3** Units

MARK DETAILS

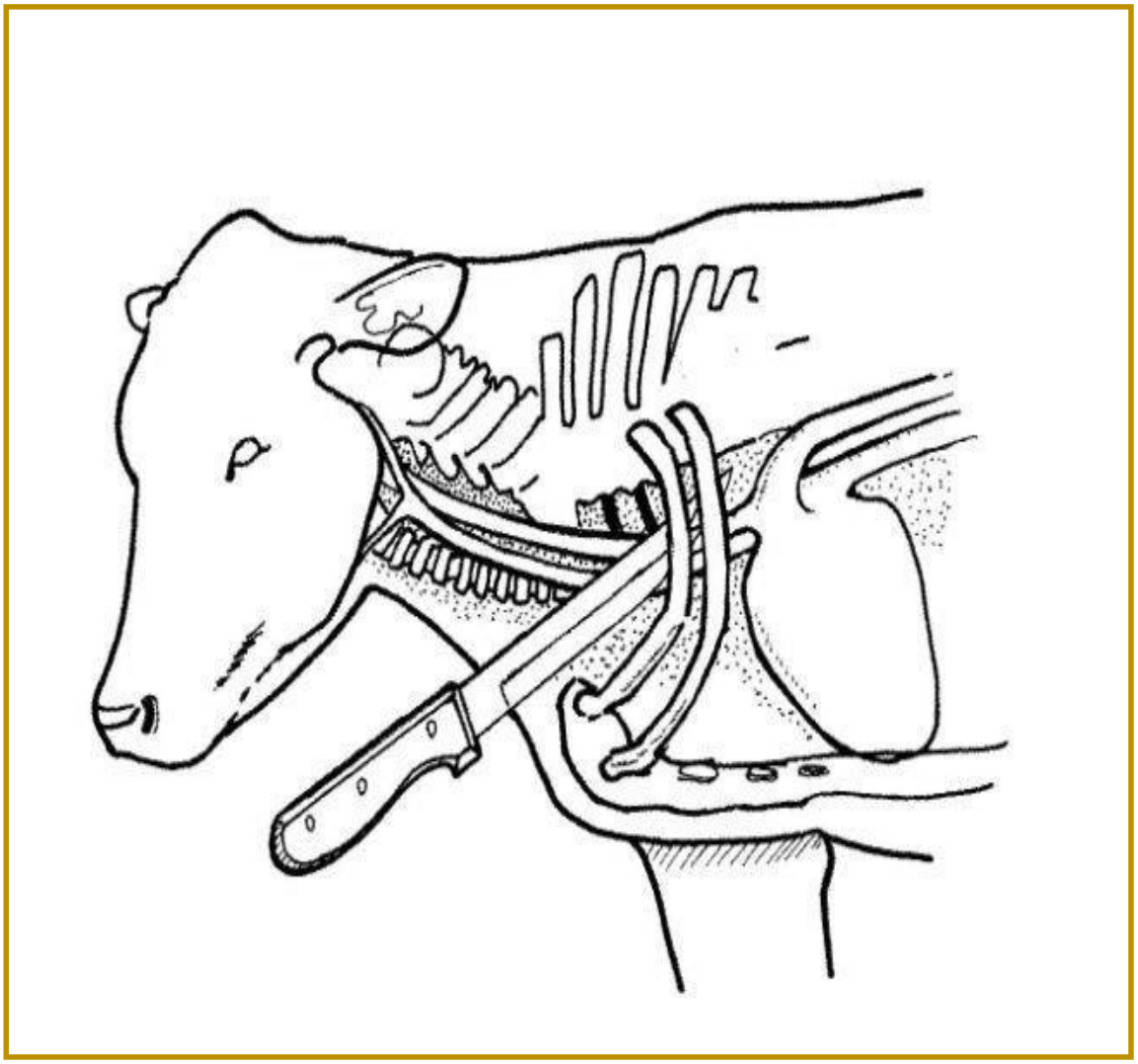
	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

INTERNALMEDICINEpart1/TheoreticalSubjects

THEORETICALSubject	Hours
Introduction	3
Generalsystemicstates	3
Digestivesystem:Principlesofalimentarytractdysfunction	6
Manifestationofalimentarytractdysfunction	3
Diseasesofthebuccalcavityandassociatedorgans,Stomatitis, Pharygealobstruction,Pharyngealparalysis,Esophagitis,esophagealobstruction	6
Diseasesoftheforestomachsofruminants	12
Diseasesofthestomachandintestine	6
Equinecolic	6
Total	**45**

Subject: MORBID ANATOMY / PART 2

FOURTH Year | **SECOND Semester**



SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**3**	Hours	**2**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**20**	**30**
Practical	**20**	**30**
TOTAL	**40**	**60**

MORBIDANATOMY part2/TheoreticalSubjects

THEORETICAL Subject	Hours
Equine disease: Strangles, Glanders, Shigellosis, Epizootic lymphangitis, Ulcerative lymphangitis, Equine infectious anemia, Equine influenza	**6**
Canine and Feline disease: Rabies, Canine distemper, Canine viral hepatitis, Feline parvovirus (Panleukopenia).	**6**
Lab animal disease: Tyzzer's disease, Coccidiosis in rabbit, External parasite	**3**
Total	**15**

MORBIDANATOMYpart 2/ PracticalSubjects

PRACTICAL Subject	Hours
Data show of Equine disease: Strangles, Glanders, Shigellosis, Epizootic lymphangitis, Ulcerative lymphangitis, Equine infectious anemia, Equine influenza	**10**
Data show of Canine and Feline disease: Rabies, Canine distemper, Canine viral hepatitis, Feline parvovirus (Panleukopenia).	**10**
Data show of laboratory disease: Tyzzer's disease, Coccidiosis in rabbit, External parasite	**10**
Total	**30**

Subject: VETERINARY OBSTETRICS

FOURTH Year | **SECOND Semester**

Fig. 1: Anterior presentation

Fig. 2: Posterior presentation

Fig. 3: Breech presentation

Fig. 4: Two front legs presenation

SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

FEMALEFERTILITYandDISEASES/TheoreticalSubjects

THEORETICAL Subject	Hours
Fertilization	1
Physiology of pregnancy	2
Maternal recognition of pregnancy	1
Length of gestation period	1
Maintenance of pregnancy	1
Pregnancy diagnosis	2
Problem of pregnancy	5
Parturition	3
Normal uterine involution	1
Uterine defense mechanism	2
Dystocia	5
Puerperal diseases	6
Total	**30**

FEMALEFERTILITYandDISEASES/PracticalSubjects

PRACTICALSubject	Hours
Implantationandembryodevelopment	2
Fetalmembrane	2
Positionofuterusduringpregnancy	2
Rectalpalpation	4
Methodofpregnancydiagnosis	4
Inductionofabortionand parturition	2
NormalPresentation,PositionandPosture	2
AbnormalPresentation,PositionandPosture	4
Obstetricalinstruments	2
Obstetricalmaneuvers	2
Fetotomy	2
Caesariansection	2
Total	**30**

Subject: VETERINARY CLINIC / PART 3

FOURTH Year | **SECOND Semester**

SUBJECT CREDITS

Theoretical		
Practical	**4** Hours	**2** Units
TOTAL	**4** Hours	**2** Units

MARK DETAILS

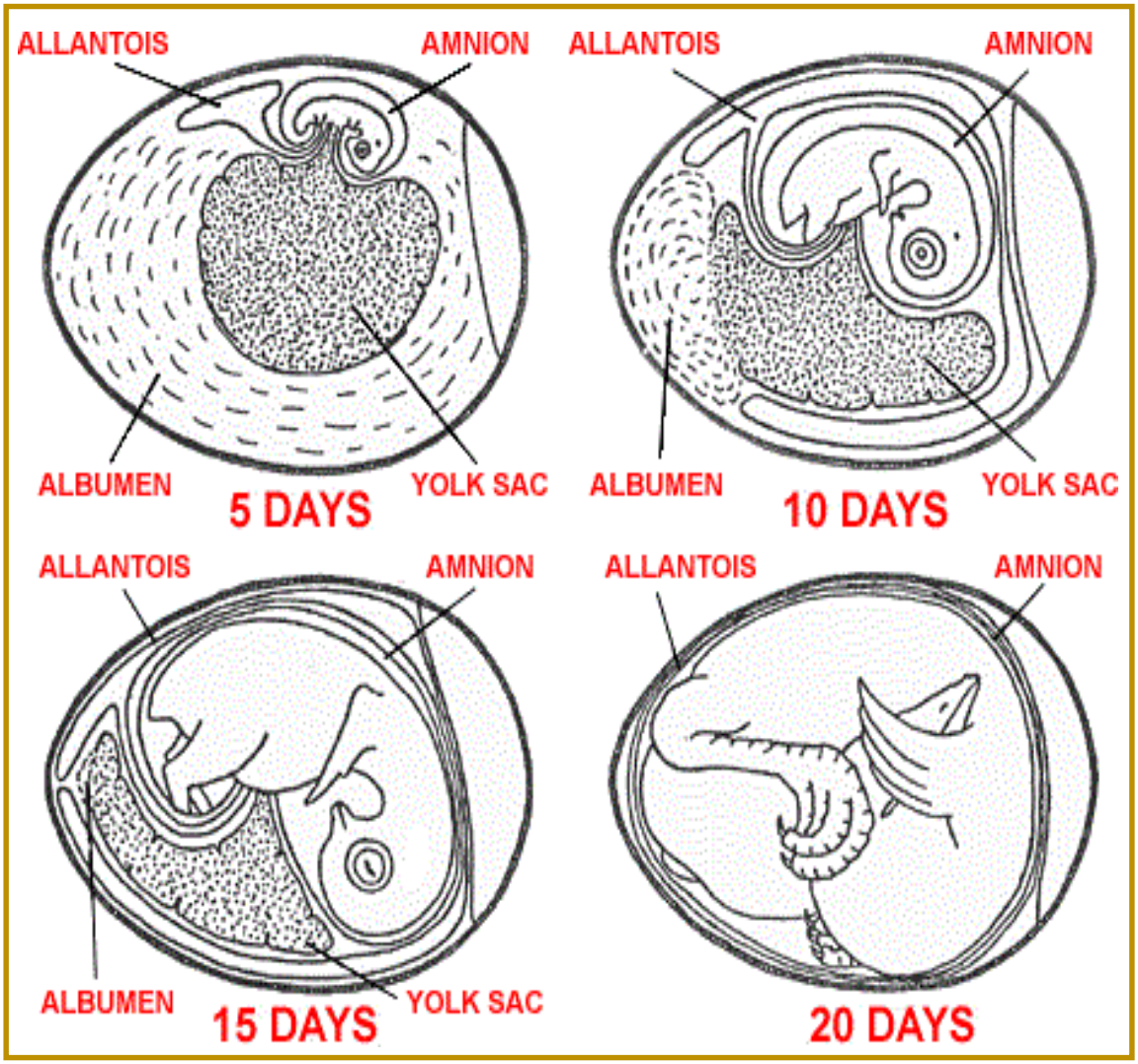
	Course Exam Marks	Final Exam Marks
Theoretical	**-**	**-**
Practical	**40**	**60**
TOTAL	**40**	**60**

VETERINARYCLINICPART3 /PracticalSubjects

PRACTICALSubject	Hours
Examinationofanimals,diagnosisandtreatmentofSurgerycases receivebyVeterinaryTeachingHospitalorfieldvisits.	**10**
Examinationofanimals,diagnosisandtreatmentofObstetriccases receivebyVeterinaryTeachingHospitalorfieldvisits.	**10**
Examinationofanimals,diagnosisandtreatmentofPoultrydiseases receivebyVeterinaryTeachingHospitalorfieldvisits.	**10**
Examinationofanimals,diagnosisandtreatmentofFishdiseases receivebyVeterinaryTeachingHospitalorfieldvisits.	**10**
Examinationofanimals,diagnosisandtreatmentofInternalMedicine diseasesreceivebyVeterinaryTeachingHospitalorfieldvisits.	**10**
Examination of animals, diagnosis and treatment of Clinical Pathologicalcasesreceivebyveterinaryteachinghospitalorfieldvisits.	**10**
Total	**60**

Subject: POULTRY DISEASES / PART 2

FOURTH Year | **SECOND Semester**



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

POULTRYDISEASESpart2/TheoreticalSubjects

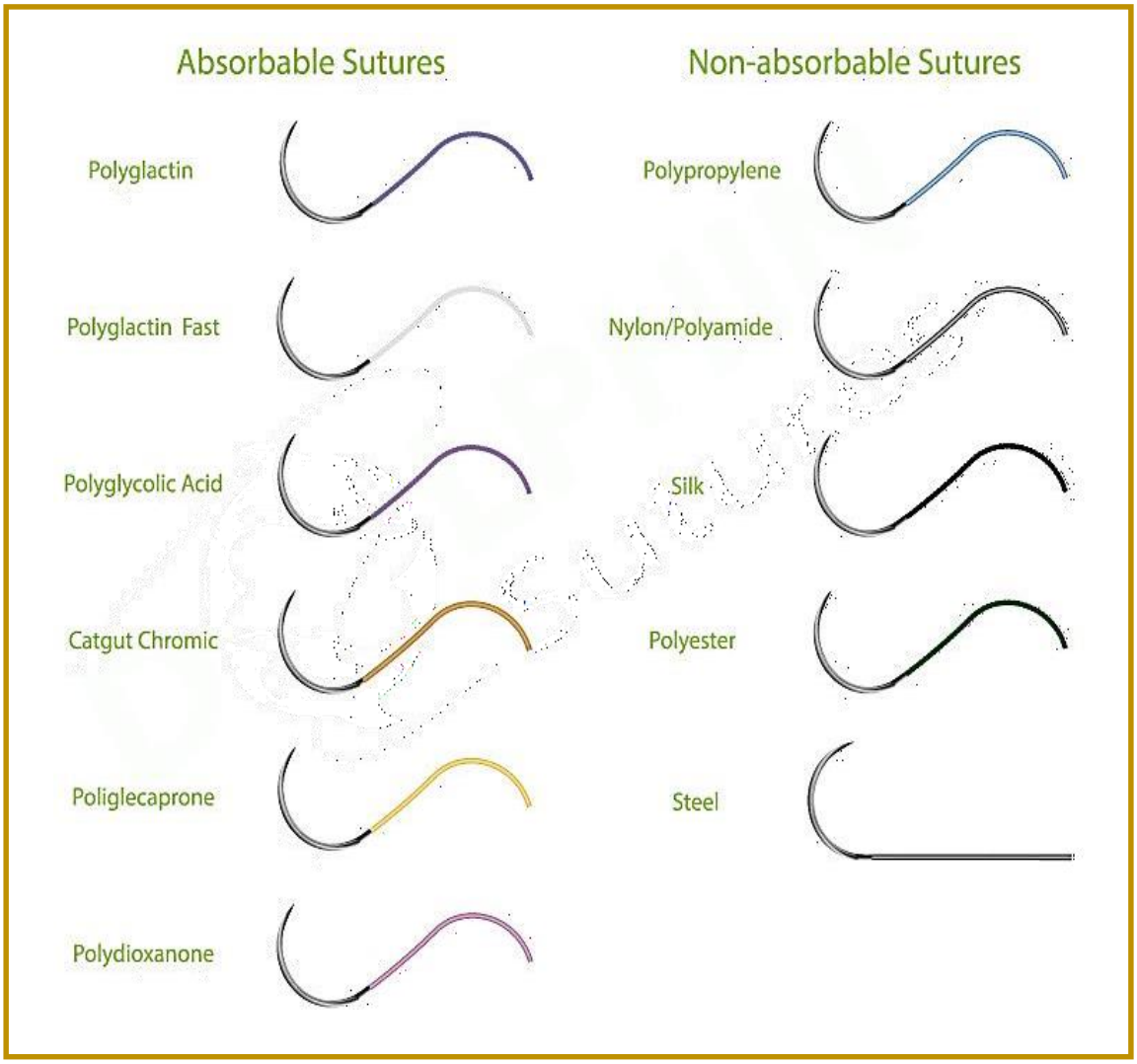
THEORETICAL Subject	Hours
Malnutrition diseases	8
Mycotic diseases	6
Parasitic diseases	8
Diseases of Pet birds and zonosis	4
Diseases of Turkey, Pigeon, Quails	4
Total	**30**

POULTRYDISEASESpart2/PracticalSubjects

PRACTICALSubject	Hours
Malnutritionofdiseases	4
Methodforkillingchickenspreparedforpostmortem	2
methodusedforvaccinationtoprotectthebirdfromviraldiseases, informationaboutvaccineusedunevenlyandpracticalapplicationonroutofvaccine	2
Parasiticdiseases	2
Drugusedfortreatmentofpoultrydiseases,methodofadministration, methodsforcalculationthequantityinwinterandsummer	2
Mycoticdiseases	2
Field visitingtolayers,parentsstock, knowingtheimportantdiseases thataffectingthisfarmandmethodofcontrol	4
Bacteriologicalandserologicalmethodandcollectionofblood,methodofpreservation,forthepurposeofdiagnosisusedlocallyand internationally	4
diseasesofseabird,wildbirdsandpreybirds(EaglesandHawks)	4
Methodsoftreatment	2
Visitingtoscientificcentrallabinveterinarymedicinecollege	2
Total	**30**

Subject: SURGERY / PART 2

FOURTH Year | **SECOND Semester**



SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**5**	Hours	**4**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**30**	**45**
Practical	**10**	**15**
TOTAL	**40**	**60**

SURGERYpart2/Theoretical Subjects

THEORETICAL Subject	Hours
Regional anesthesia	3
Preanesthetic consideration	2
Premeditation and muscle relaxant	3
Inhalation anesthesia	6
Anesthesia of lab animals and birds	3
X-ray	2
Radiation hazard and protection	2
Diagnostic and procedures of radiology	2
Processing of X-Ray	2
Fracture	5
Lameness and hoof affection	9
Laser surgery	2
Eye and ear	4
Total	**45**

SURGERYpart2/PracticalSubjects

PRACTICAL Subject	Hours
General anesthesia	6
X-ray	6
Orthopedics surgery	6
Tendon surgery	2
Intra articular injection	2
Laser surgery	2
Eye and ear surgery	2
Docking	2

Examination		**2**
	Total	**30**

Subject:INFECTIOUS&EPIDEMIOLOGICAL DISEASES/PART2

FOURTH Year	SECOND Semester

SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical				
TOTAL	**3**	Hours	**3**	Units

MARK DETAILS

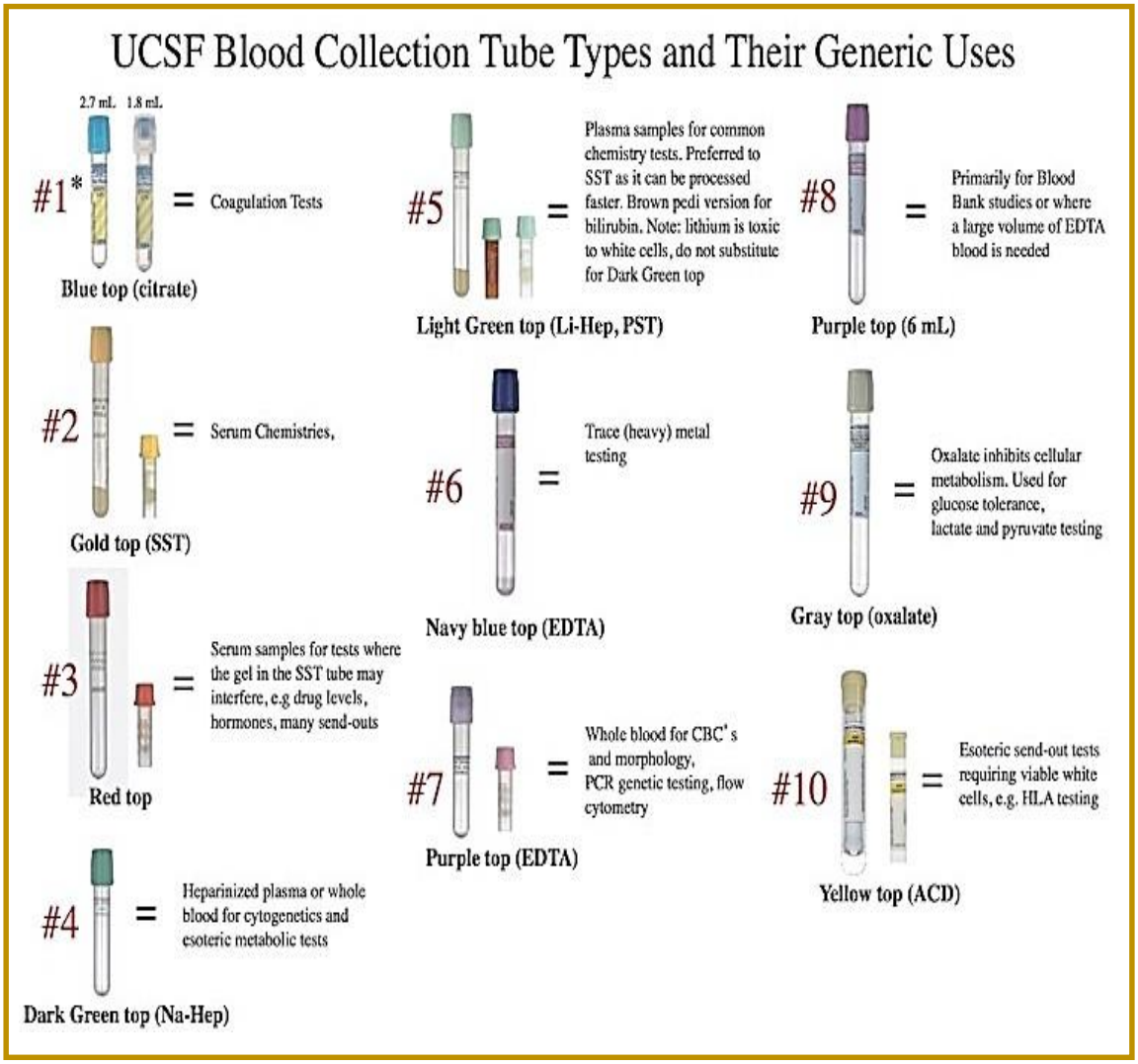
	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

INFECTIOUS&EPIDEMIOLOGICALDISEASES part2/ TheoreticalSubjects

THEORETICAL Subject	Hours
Diseases caused by Viruses	15
Diseases caused by Fungus	15
Diseases caused by Parasites	15
Total	**45**

Subject: CLINICAL PATHOLOGY / PART 2

FOURTH Year | **SECOND Semester**



SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**3**	Hours	**2**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**20**	**30**
Practical	**20**	**30**
TOTAL	**40**	**60**

CLINICALPATHOLOGYpart2 /TheoreticalSubjects

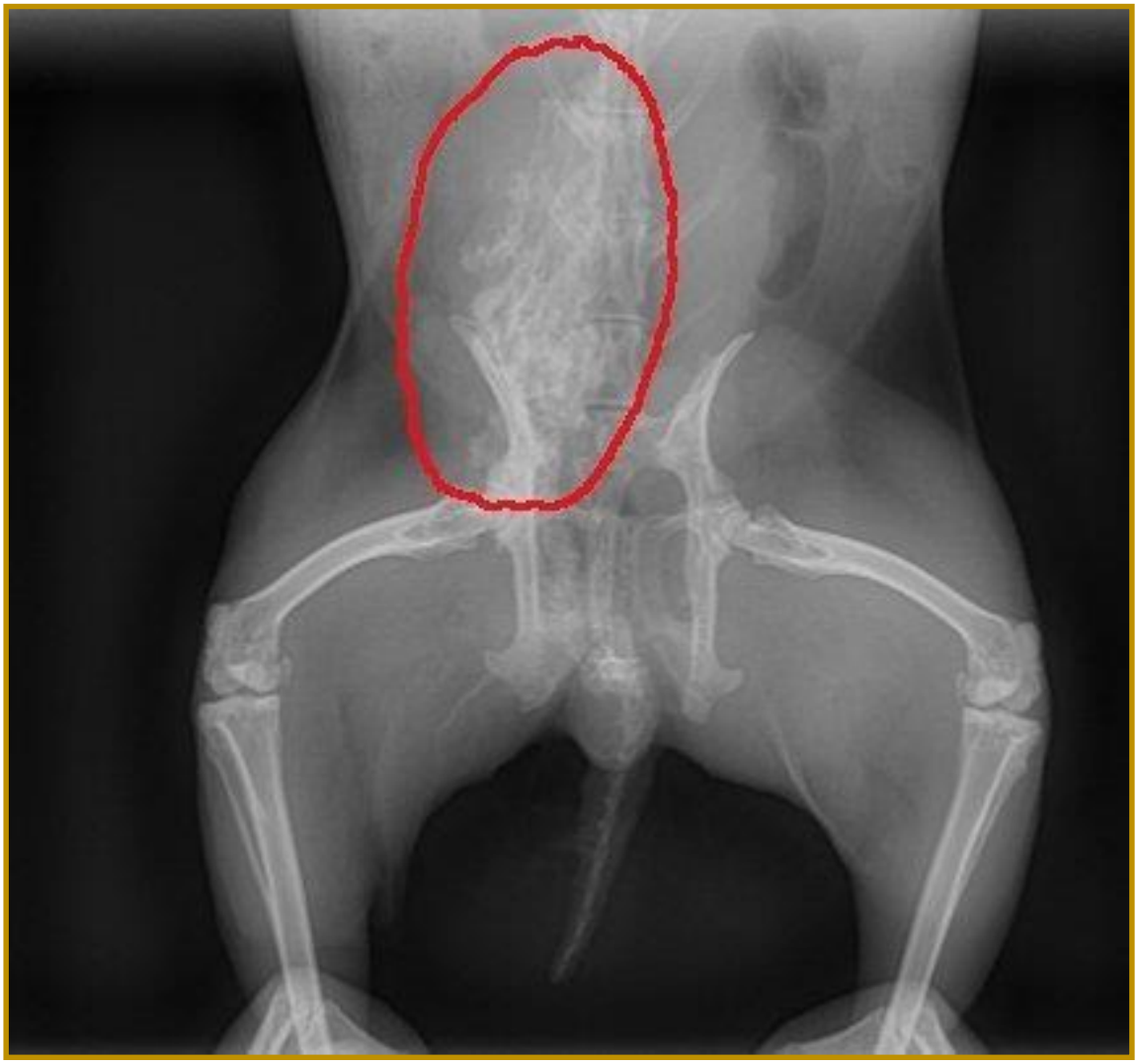
THEORETICAL Subject	Hours
Clinical parasitology	4
Rumen fluid examination	1
Clinical microbiology	2
Milk Examination	2
Antimicrobial sensitivity test	1
Clinical immunology	3
Transudate and exudate	1
Water electrolytes and acid - base imbalance	1
Total	**15**

CLINICALPATHOLOGYpart2 /PracticalSubjects

PRACTICALSubject	Hours
Fecalexamination	4
Skinscrapingexamination	2
Clinicalmicrobiology	4
MilkExamination(physicalandchemical)	4
MilkExamination(Bacterial)	2
Antimicrobialsensitivitytest	4
Rumenfluidexamination	2
Serologicaltest	4
Testsofdetectionoftoxicsubstances.	4
Total	**30**

Subject:INTERNALMEDICINE/PART2

FOURTH Year	SECOND Semester



SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical				
TOTAL	**3**	Hours	**3**	Units

MARK DETAILS

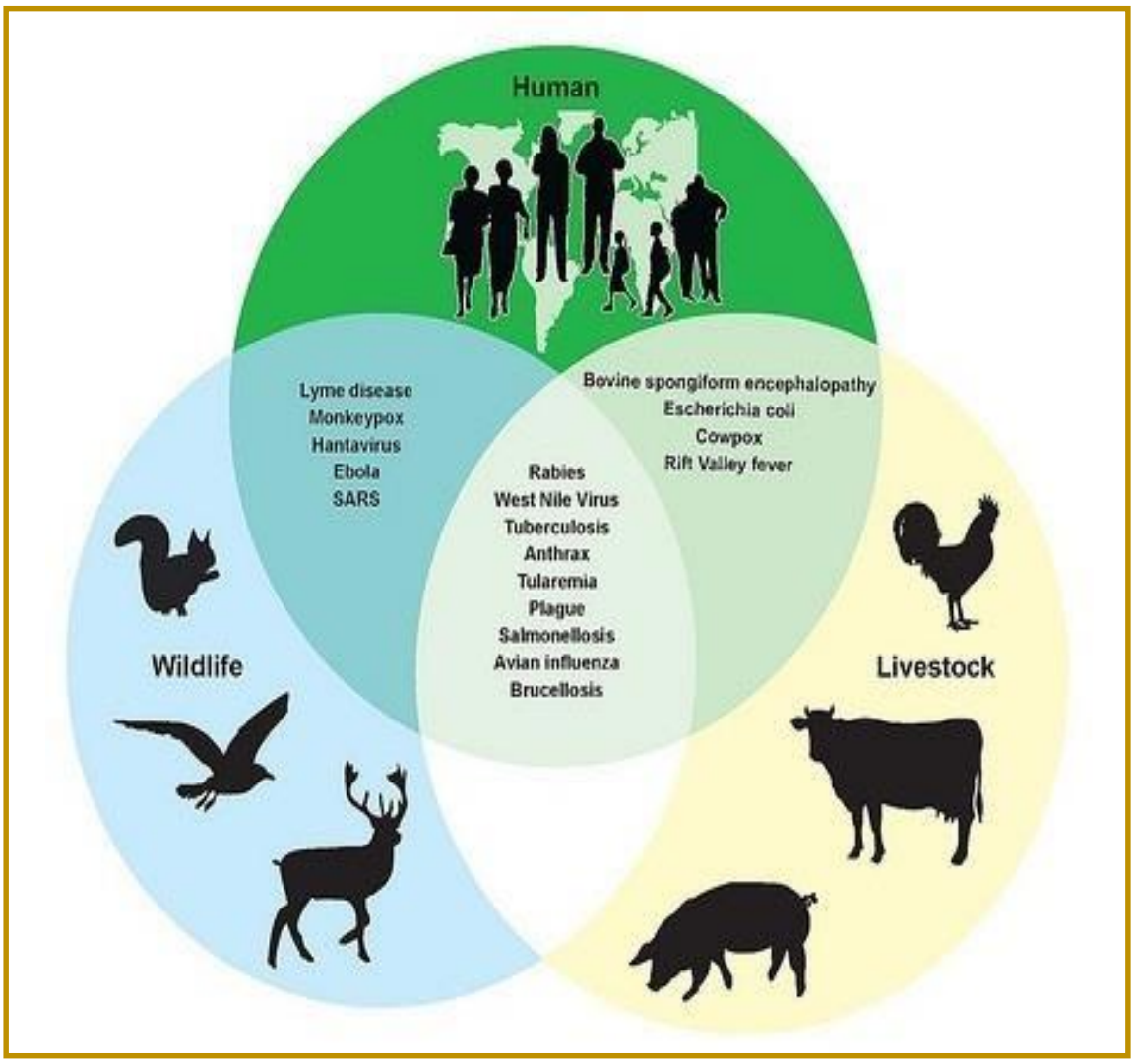
	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

INTERNALMEDICINEpart2/TheoreticalSubjects

THEORETICAL Subject	Hours
Diseases of Liver	9
Diseases of Nervous system	15
Diseases of Respiratory system	15
Diseases of Skin	6
Total	**45**

Subject:ZOONOTICDISEASES

FOURTH Year | **SECOND Semester**



SUBJECT CREDITS

Theoretical	**2** Hours	**2** Units
Practical		
TOTAL	**2** Hours	**2** Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

ZOONOTICDISEASES/TheoreticalSubjects

THEORETICALSubject	Hours
Introductiontothezoonosis	1
Principlesofzoonosisrecognition	1
Principlesofzoonosiscontrolandprevention	1
Viralzoonosis:FMD,Bovinepopularstomatitis,Cowpox,Orf, pseudocowpox	1
ArgentinHemorrghicfever,Crimean-CongoHemorrghicfever, EbolaHemorrghicfever,Riftvalleyfever,Viralhepatitistype,vitamin deficiencyA,B,C,D,E.	1
Eastern,VenezuelanandWesternequineencephalitis	1
Louping-ill,Madcowdisease	1
Rabies,Californiaencephalitis,Coloradotickfever	1
WestNilefever,Yellowfever,Nairobisheepdisease	1
Influenza(swineandequine)	1
Newcastledisease,Psittacosis,Qfever	1
Bacterialzoonosis,Anthrax,Listerosis,Leptospirosis,Lepracy	1
Botulism,Brucellosis,Campylobacterosis	1
Tuberculosis	1
Closterdiumperfringesfoodpoisoning,Streptocuccosis, Staphylococuccosis	1
Colibacillosis,Vibriosis	1
Salmonllosis,Shigellosis	1
Catscratchdisease,Rat bitfever,Plague.	1
Tetanus,Clostridialhistotoxicinfection	1
Glandersandcorynbacteriuminfection	1
Parasiticzoonosis,Arthropodinfectionandtickparalysis	1
Cestodainfection:Coenuriasis,Taeniasis.	1
Echinococcosis,Diphyllobothriasis.	1
Trematodeinfection:Fascioliasis,Dictoceliasis	1
Nematodeinfection:Ascariasis,Capillariasis,Filariasis,Thelaziasis, Trichinosis	1
Cutanouslarvamigrans,Viscerallarvamigrant	1
Protozoainfection:Toxoplasmosis,Cryptosporidiosis,Giadiasis, Sarcocytosis, Babesiosis, Balantidiasis, Lishmaniasis,Trypanosomiasis	2
Fungalinfection: Dematomycosis,Actinomycosis,Blastomycosis, Candidiasis,Histoplasmosis,Ringworm,Nocardiosis.	2
Total	**30**

Curriculum Summary for Fourth Year Subject / First semester

No.	Subjects	Credits	Theoretical	Practical	Total
1	Morbid anatomy / part 1	Units	1	1	2
		Hours	1	2	3
2	Female fertility and genital diseases	Units	2	1	3
		Hours	2	2	4
3	Veterinary clinic / part 2	Units	-	2	2
		Hours	-	4	4
4	Poultry diseases /part 1	Units	2	1	3
		Hours	2	2	4
5	Surgery / part 1	Units	3	1	4
		Hours	3	2	5
6	Infectious and epidemiological diseases / part 1	Units	3	-	3
		Hours	3	-	3
7	Clinical pathology / part 1	Units	1	1	2
		Hours	1	2	3
8	Internal medicine / part 1	Units	3	-	3
		Hours	3	-	3

Total Subjects: 8 **Total Units: 22** **Total Hours: 29**

Curriculum Summary for Fourth Year Subject / Second semester

No.	Subjects	Credits	Theoretical	Practical	Total
1	Morbid anatomy / part 2	Units	1	1	2
		Hours	1	2	3
2	Veterinary obstetrics	Units	2	1	3
		Hours	2	2	4
3	Veterinary clinic / part 3	Units	-	2	2
		Hours	-	4	4
4	Poultry diseases /part 2	Units	2	1	3
		Hours	2	2	4
5	Surgery / part 2	Units	3	1	4
		Hours	3	2	5
6	Infectious and epidemiological diseases / part 2	Units	3	-	3
		Hours	3	-	3
7	Clinical pathology / part 2	Units	1	1	2
		Hours	1	2	3
8	Internal medicine / part 2	Units	3	-	3
		Hours	3	-	3

9	Zoonotic diseases	Units	2	-	2
		Hours	2	-	2

Total Subjects: 9 **Total Units: 24** **Total Hours: 31**

Subject: SUMMER CLINIC

FIFTH Year	6XPPHU Semester

SUBJECT CREDITS

TOTAL	**3** Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**-**	**-**
Practical	**40**	**60**
TOTAL	**40**	**60**

SUMMERCLINIC/PracticalSubjects

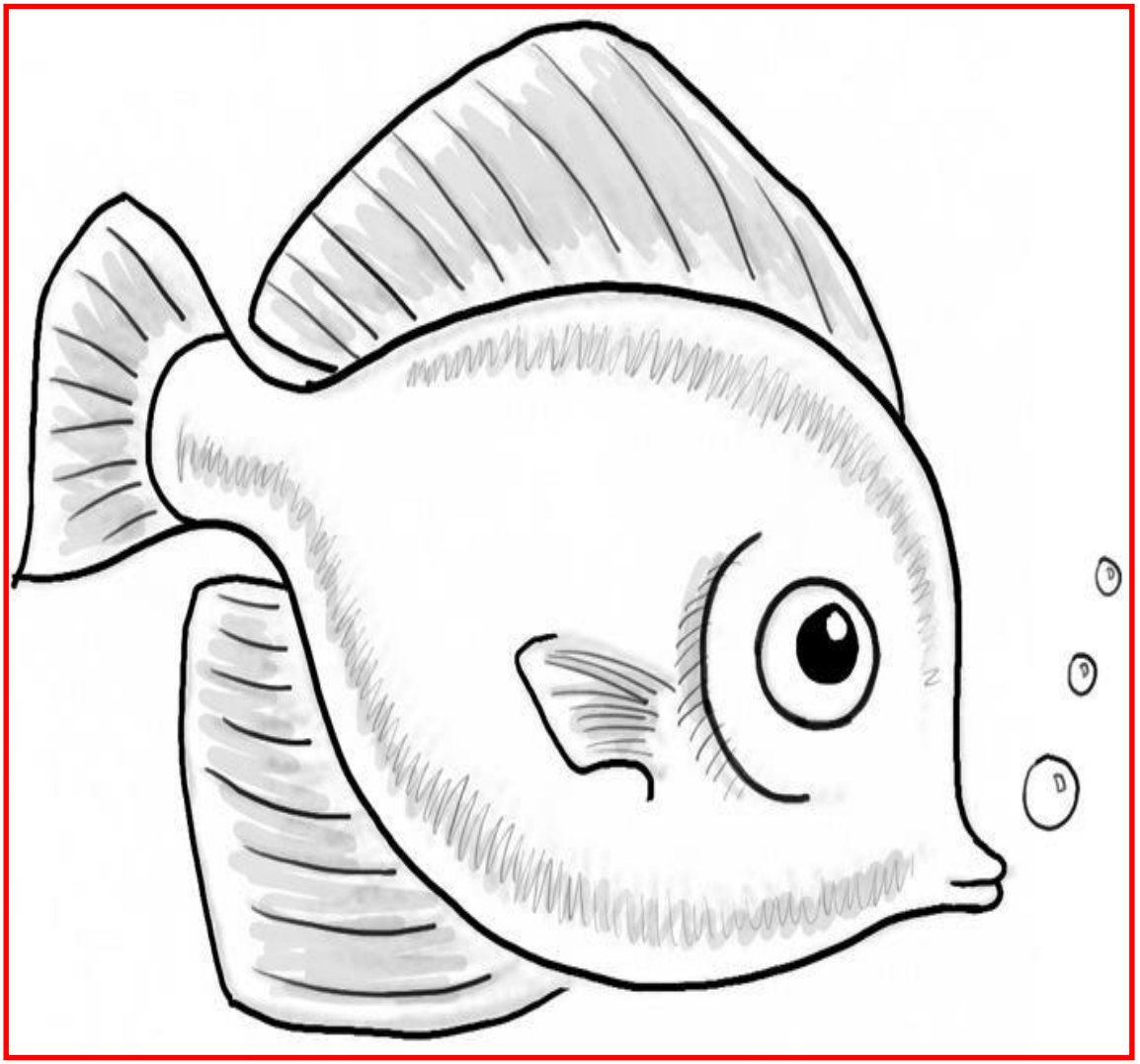
Practical Subject	Days
Examination of animals, diagnosis and treatment of Surgery cases receive by Veterinary Teaching Hospital or field visits.	10
Examination of animals, diagnosis and treatment of Obstetric cases receive by Veterinary Teaching Hospital or field visits.	10
Examination of animals, diagnosis and treatment of Poultry and Fish diseases receive by Veterinary Teaching Hospital or field visits.	10
Examination of animals, diagnosis and treatment of Internal Medicine diseases receive by Veterinary Teaching Hospital or field visits.	10
Examination of animals, diagnosis and treatment of Clinical Pathological cases receive by Veterinary Teaching Hospital or field visits.	10
Total	**48**

*The**SUMMERCLINIC**isheldduringsummerafterpassingthefourthyear.


1
SYLLABUS OF FIRST YEAR
2
SYLLABUS OF SECOND YEAR
3
SYLLABUS OF THIRD YEAR
4
SYLLABUS OF FOURTH YEAR
5
SYLLABUS OF FIFTH YEAR

Subject: FISH DISEASES

FIFTH Year | **FIRST Semester**



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

FISH DISEASES /Theoretical Subjects

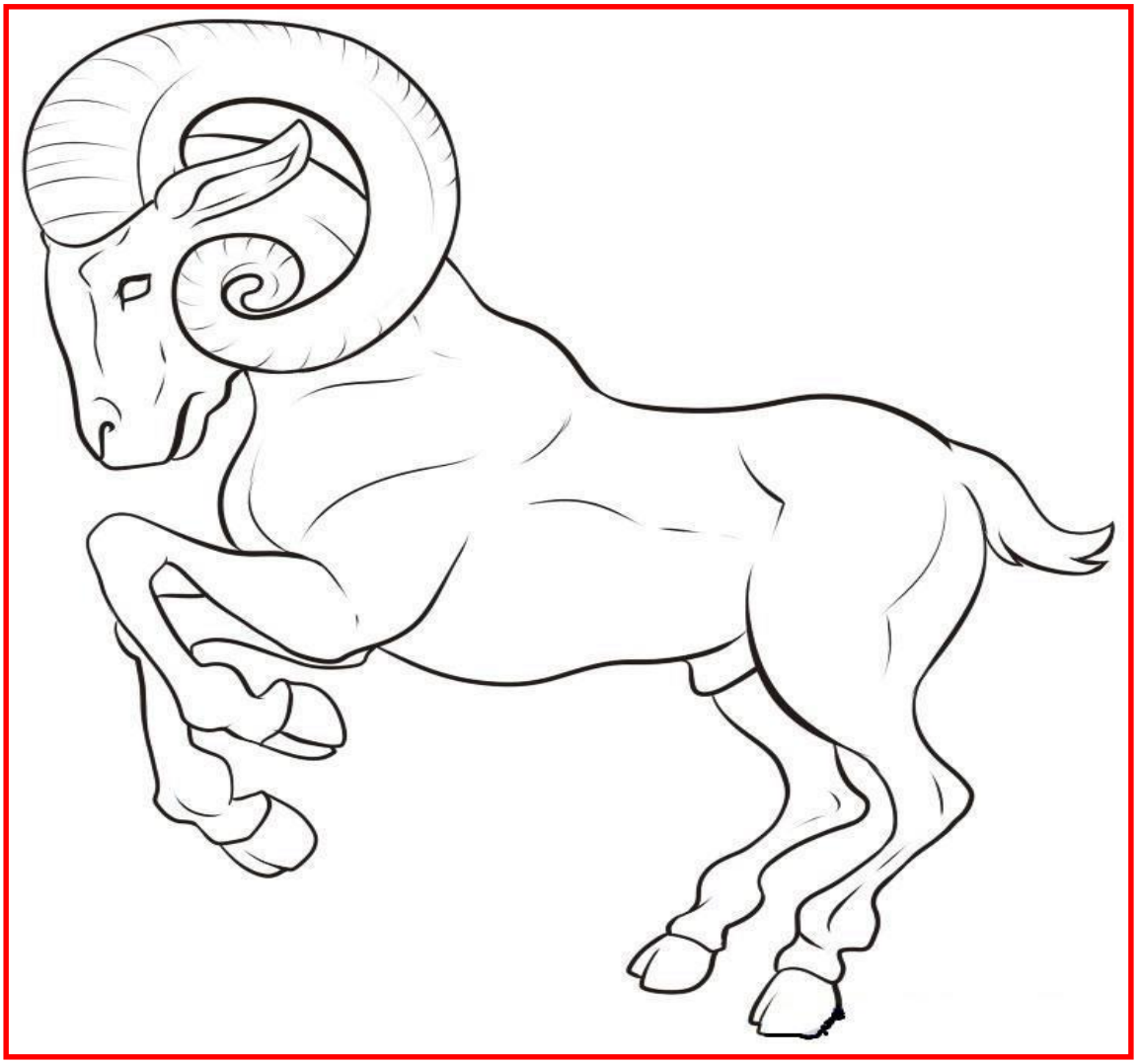
THEORETICAL Subject	Hours
Introduction of Ichthyology and Fish Pathology	2
Prevention and health control	4
Infectious diseases	8
Parasitic diseases	10
Non infectious diseases	6
Total	**30**

FISHDISEASES/PracticalSubjects

PRACTICALSubject	Hours
Introductioninfishbreedinganddiseases	2
Externalappearanceforfishandanatomy	2
Physicalandchemicalpropertyofpondwater	2
Pond'sdesigned	2
Fishfeeding,breeding,andtypesofponds	2
Sampletakenandpreservation	2
Practicalexamination	2
Practicaltestsandbacterialcultureinfish	2
Parasitictestsanddiagnosismethodsinfish	2
Practicalfishingandfieldfishexam	2
Diagnosticandpathologicalslidesshow	2
Methodswithpracticalapply	2
Practicalworkonpathologicalsamplesfordiagnosis	2
Pond'sfertilizationandit'smethods	2
FinalPracticalexamination	2
Total	**30**

Subject:MALEFERTILITYandARTIFICIAL INSEMINATION

FIFTH Year | **FIRST Semester**



SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**3**	Hours	**2**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**20**	**30**
Practical	**20**	**30**
TOTAL	**40**	**60**

MALEFERTILITYand ARTIFICIALINSEMINATION/ TheoreticalSubjects

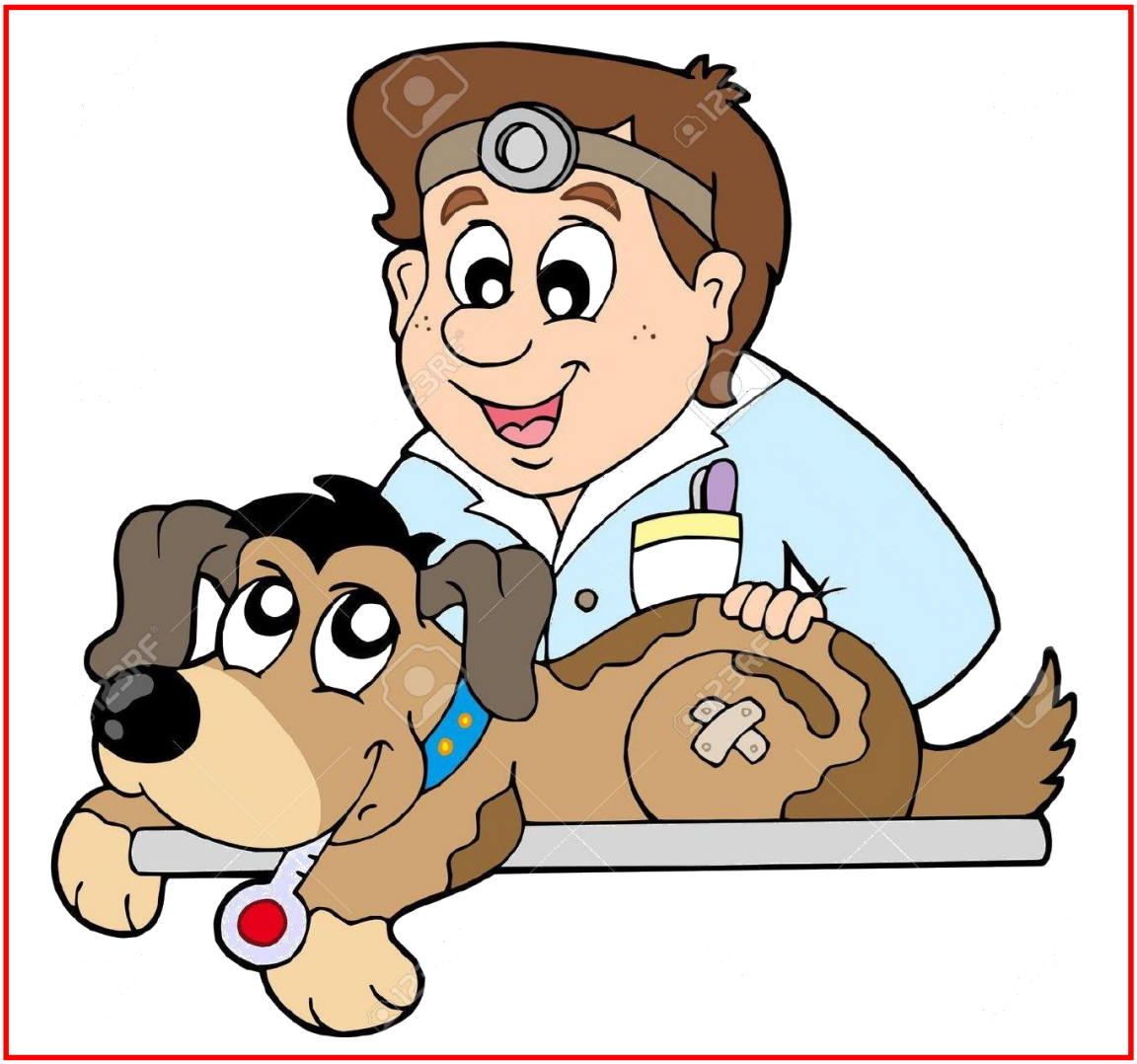
THEORETICAL Subject	Hours
Male puberty and maturity	1
Hormonal control of male reproductive system	1
Spermatogenesis	1
Composition of semen	1
Sperm metabolism	1
Method of semen collection	1
Method of semen evaluation	2
Method of semen dilution	2
Method of semen storage	1
Artificial insemination and Sperm transport	1
Infertility in males	3
Total	**15**

MALEFERTILITYand ARTIFICIALINSEMINATION/ PracticalSubjects

PRACTICALSubject	Hours
Anatomyofthemalegenitalsystem	2
Breedingsoundness	2
Semencollection	4
Semenevaluation(macroscopically:volume,color,microscopically: massandindividualmotility)	4
Semenevaluation(Live/deadandabnormalitypercentage)	2
Semendilution	2
Semenstorage(Liquidandfrozen)	4
Inseminationtechniques	4
Infertilityinmales	6
Total	30

Subject: VETERINARY CLINIC /PART 4

FIFTH Year	FIRST Semester



SUBJECT CREDITS

Theoretical				
Practical	**14**	Hours	**7**	Units
TOTAL	**14**	Hours	**7**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**-**	**-**
Practical	**40**	**60**
TOTAL	**40**	**60**

VETERINARYCLINICpart4/ PracticalSubjects

PRACTICAL Subject	Hours
Examination of animals, diagnosis and treatment of Surgery cases receive by Veterinary Teaching Hospital or field visits.	35
Examination of animals, diagnosis and treatment of Obstetric cases receive by Veterinary Teaching Hospital or field visits.	35
Examination of animals, diagnosis and treatment of Poultry diseases receive by Veterinary Teaching Hospital or field visits.	35
Examination of animals, diagnosis and treatment of Fish diseases receive by Veterinary Teaching Hospital or field visits.	35
Examination of animals, diagnosis and treatment of Internal Medicine diseases receive by Veterinary Teaching Hospital or field visits.	35
Examination of animals, diagnosis and treatment of Clinical Pathological cases receive by Veterinary Teaching Hospital or field visits.	35
Total	**210**

Subject: INTERNAL MEDICINE / PART 3

FIFTH Year	FIRST Semester

SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical				
TOTAL	**3**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

INTERNALMEDICINEpart3/TheoreticalSubjects

THEORETICAL Subject	Hours
Metabolic Diseases: Milk fever, Downer cow syndrome, Hypomagnesemia tetany, Pregnancy toxemia, Ketosis, Post parturient Hb urea, Azotouria.	**25**
Nutritional Diseases: - Vitamin deficiency: D, A, E, K, C and B vitamins. - Mineral deficiency: Ca, P, Cu, Iodine, Mn, Zn and Osteomalacia.	**20**
Total	**45**

Subject: MEAT HYGIENE

FIFTH Year | **FIRST Semester**

SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

MEATHYGIENE/TheoreticalSubjects

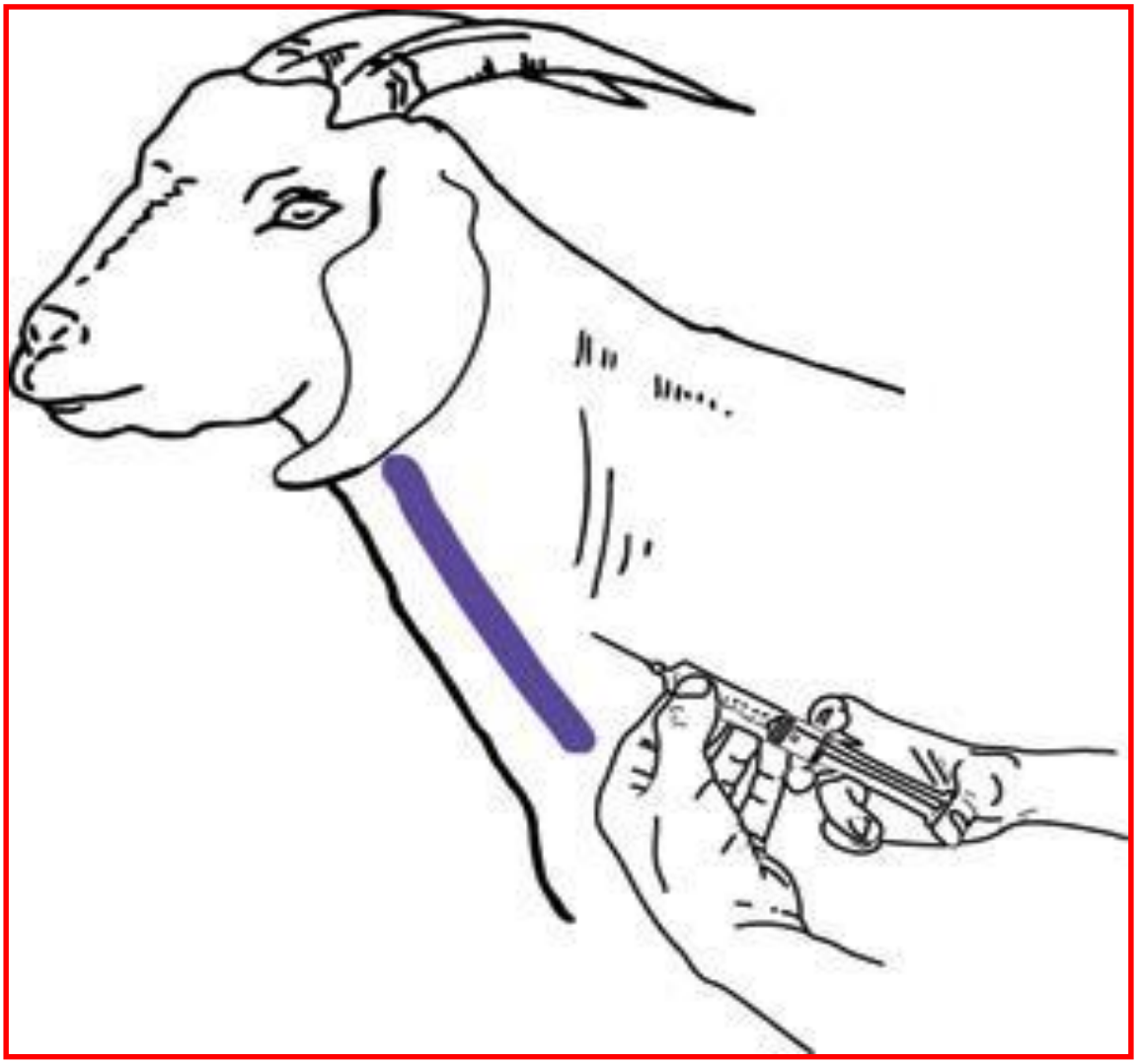
THEORETICAL Subject	Hours
The food animals	2
Meat composition and quality	2
Meat plant construction and equipment	2
Preservation of meat	2
Plant sanitation	2
Human slaughter, Meat hygiene practice, Red meat inspection	2
Poultry slaughter and inspection	2
Meat spoilage, food poisoning	2
Chemical residues in meat	2
Meat microbiology	4
Judgment of diseases caused by helminthes and arthropods	2
Judgment of diseases caused by bacteria	2
Judgment of diseases caused by viruses	2
Judgment of poultry diseases	2
Total	**30**

MEATHYGIENE /PracticalSubjects

PRACTICALSubject	Hours
Poultryslaughterhouse	2
Poultrycarcasses:pathologicalcases,examinationandjudgments	2
Poultrycarcassesportioning	2
Meatquality	2
Examiningtheheadandjudgments	2
Examiningthecarcassesandjudgments	2
Examiningthevisceraandjudgments	2
Comparativeanatomyofcarcassorgans	4
Specificationsofmeat,fatsofanimals	2
Bleeding	2
Acidityandabnormalodors,jaundice	2
Meatmicrobiology	4
Teethingofanimals	2
Total	**30**

Subject: SURGERY / PART 3

FIFTH Year	FIRST Semester



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

SURGERYpart 3/Theoretical Subjects

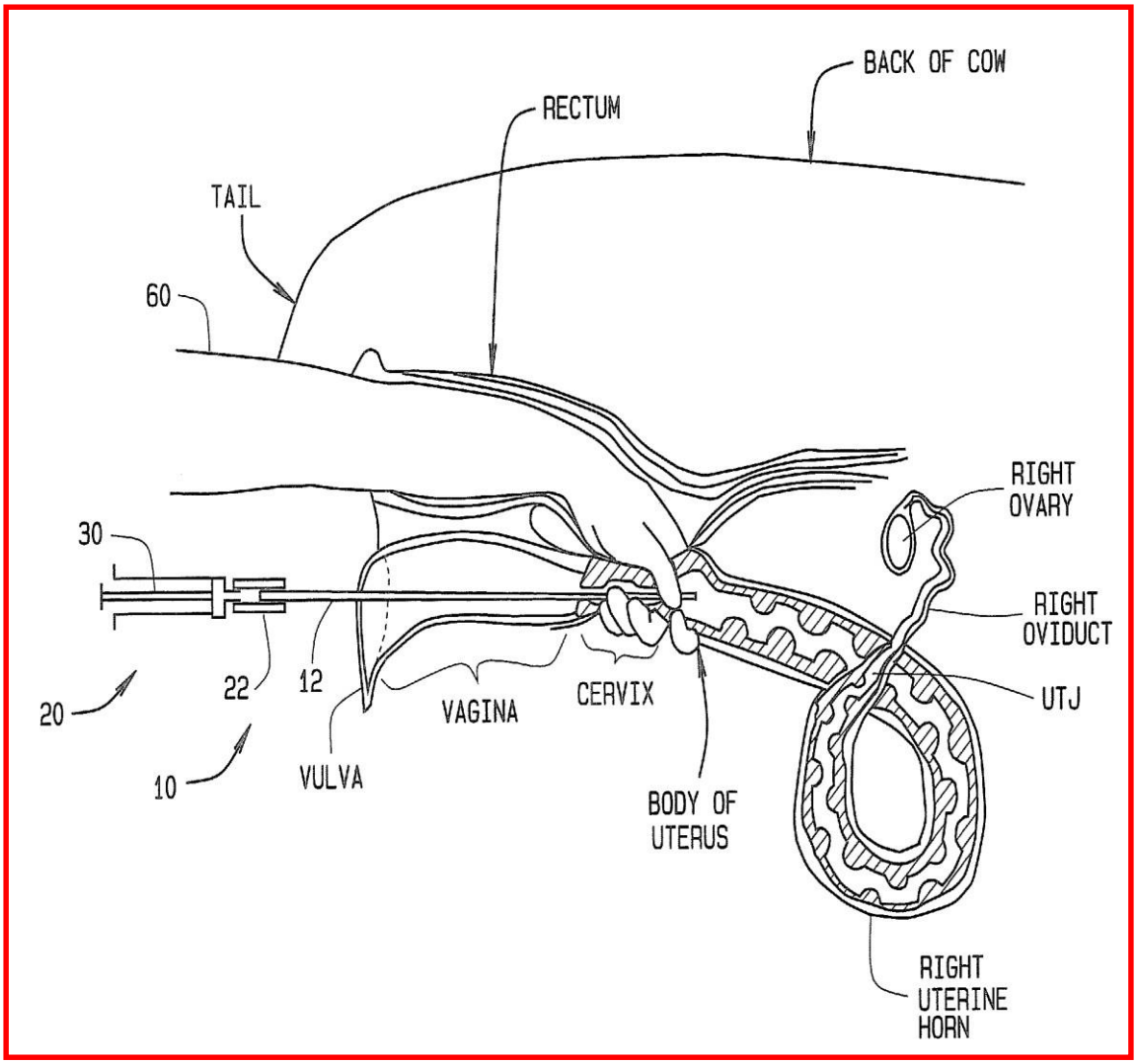
THEORETICAL Subject	Hours
Digestive system: Affection of salivary gland	2
Affection of tongue	2
Affection of teeth	2
Affection of esophagus	2
Affection of stomach	2
Affection of small intestine	2
Affection of digestive accessory organs	2
Facial paralysis	2
Respiratory system: Affection of upper tract	2
Affection of larynx and guttural	2
Affection lungs and trachea	4
Affection of chest wall	2
Cardiovascular system: cardiac anomalies	2
Pericarditis	2
Total	**30**

SURGERYpart3/PracticalSubjects

PRACTICALSubject	Hours
Oesophagotomy	4
Tracheotomy	4
Intestinalsurgery	6
Enterotomy	4
Castration	4
Gastrotomy	4
Mammectomy	4
Total	**30**

Subject: REPRODUCTIVE BIOTECHNOLOGY

FIFTH Year | **SECOND Semester**



SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**3**	Hours	**2**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**20**	**30**
Practical	**20**	**30**
TOTAL	**40**	**60**

REPRODUCTIVEBIOTECHNOLOGY/TheoreticalSubjects

THEORETICAL Subject	Hours
Ultrasonography-general information	1
Ultrasonography in large animals	1
Ultrasonography in small animals	1
Estrus synchronization in bovine	1
Estrus synchronization in ovine and caprine	1
Controlling the age of puberty	1
Superovulation	1
Embryo Transfer	2
Laparoscopic intrauterine insemination	1
Methods of oocyte collection and maturation	1
In vitro fertilization	1
Sperm sexing (Gender selection)	1
Cloning and splitting of embryo	1
Suppress of reproductive activity	1
Total	**15**

REPRODUCTIVEBIOTECHNOLOGY/Prac

PRACTICALSubject	Hours
Clinicalapplicationofultrasonography	4
Estrussynchronization	2
Controllingtheageofpuberty	2
Superovulation	2
Embryotransfer	2
Intrauterineinsemination	2
Methodsofoocytecollectionandmaturation	2
Invitrofertilization	4
Spermsexing(Genderselection)	2
Cloningandsplittingofembryo	2
Suppressofreproductiveactivity	2
Ovariectomyandcastration	4
Total	**30**

Subject: VETERINARY CLINIC /PART 5

FIFTH Year | **SECOND Semester**

SUBJECT CREDITS

Theoretical				
Practical	**12**	Hours	**6**	Units
TOTAL	**12**	Hours	**6**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**-**	**-**
Practical	**40**	**60**
TOTAL	**40**	**60**

VETERINARYCLINICpart5/ PracticalSubjects

PRACTICAL Subject	Hours
Examination of animals, diagnosis and treatment of Surgery cases receive by Veterinary Teaching Hospital or field visits.	30
Examination of animals, diagnosis and treatment of Obstetric cases receive by Veterinary Teaching Hospital or field visits.	30
Examination of animals, diagnosis and treatment of Poultry diseases receive by Veterinary Teaching Hospital or field visits.	30
Examination of animals, diagnosis and treatment of Fish diseases receive by Veterinary Teaching Hospital or field visits.	30
Examination of animals, diagnosis and treatment of Internal Medicine diseases receive by Veterinary Teaching Hospital or field visits.	30
Examination of animals, diagnosis and treatment of Clinical Pathological cases receive by Veterinary Teaching Hospital or field visits.	30
Total	**180**

Subject: VETERINARY ETHICS

FIFTH Year | **SECOND Semester**

SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical				
TOTAL	**1**	Hours	**1**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

VETERINARYETHICS/ TheoreticalSubjects

THEORETICAL Subject	Hours
Veterinarians Medical Doctor Duties	1
Ethics of Veterinarians	1
Veterinary job Licenses	1
Veterinary Medicine clinic	1
Veterinary Medical Services	1
Veterinary Medical consultant burses	1
Order for giving consultant	1
Graduating consultant of veterinaries	1
Job Ethics	7
Total	**15**

Subject: INTERNAL MEDICINE / PART 4

FIFTH Year | **SECOND Semester**

SUBJECT CREDITS

Theoretical	**3**	Hours	**3**	Units
Practical				
TOTAL	**3**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**40**	**60**
Practical	**-**	**-**
TOTAL	**40**	**60**

INTERNALMEDICINEpart4/TheoreticalSubjects

THEORETICAL Subject	Hours
Cardiovascular system	10
Blood and blood forming organs	15
poisonous material	10
Urinary system	10
Total	**45**

Subject: FOOD HYGIENE

FIFTH Year | **SECOND Semester**

SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

FOODHYGIENE/TheoreticalSubjects

THEORETICAL Subject	Hours
Milk and chemical composition of raw milk	3
Method of treating milk	3
Microbiological of dairy milk	3
Safety and quality of dairy products	
Milk from farm to plant	3
Mammary gland and milk biosynthesis	3
Hygiene by design	
Pathogenic of raw milk	3
Canned food hygiene	2
Egg hygiene	2
Fish hygiene	2
Total	**30**

FOODHYGIENE/PracticalSubjects

PRACTICALSubject	Hours
Milkspecificgravity	5
Determinationoffatandtotalsolidsinmilk	5
Adulterationofmilk	4
Antibioticresiduesinmilk	4
Mastitistests	4
Determinationof aflatoxins inmilk	4
Eggexamination	2
Cannedfoodexamination	2
Total	**30**

Subject: VETERINARY FORENSIC PATHOLOGY

FIFTH Year | **SECOND Semester**

SUBJECT CREDITS

Practical		
TOTAL	1 Hours	1 Units

MARK DETAILS

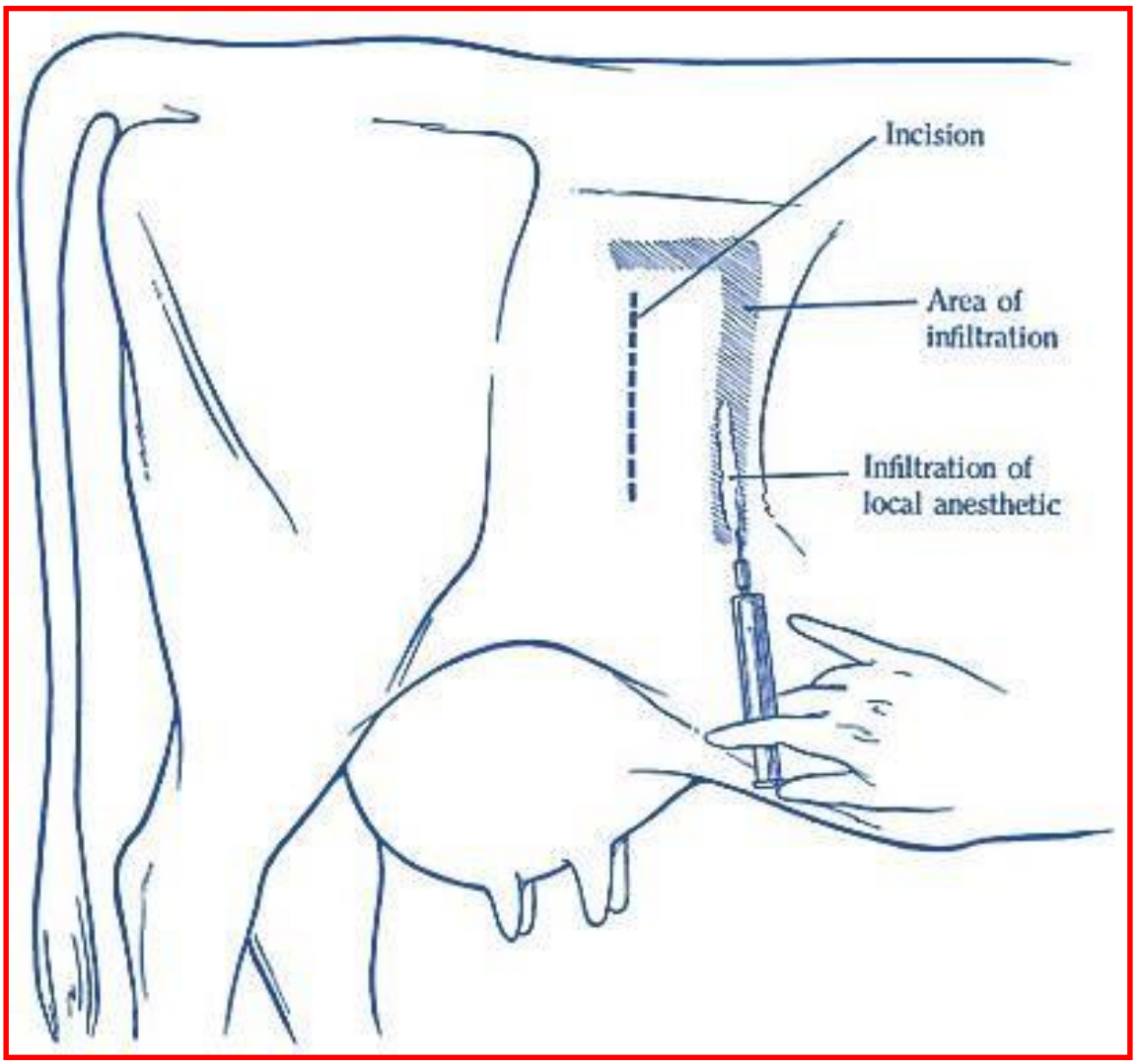
	Course Exam Marks	Final Exam Marks
Theoretical	40	60
Practical		
TOTAL	40	60

VETERINARYFORENSICPATHOLOGY /TheoreticalSubjects

THEORETICAL Subject	Hours
Death, cause of general death, syncope, asphyxia	3
Drowning, sudden death, death from starvation, death from cold, death from effect of heat, death from electric current	3
Burns and it's types	3
Wounds and it's types	3
Toxin and it's types	3
Total	**15**

Subject: SURGERY / PART 4

FIFTH Year | **SECOND Semester**



SUBJECT CREDITS

Theoretical	**2**	Hours	**2**	Units
Practical	**2**	Hours	**1**	Units
TOTAL	**4**	Hours	**3**	Units

MARK DETAILS

	Course Exam Marks	Final Exam Marks
Theoretical	**27**	**40**
Practical	**13**	**20**
TOTAL	**40**	**60**

SURGERYpart 4/Theoretical Subjects

THEORETICAL Subject	Hours
Hernia	2
Treatment of Fistula whether	2
Affection of male genital system	2
Affection female genital system	2
Treatment Pneumovagina	2
Affection of penis and prepuce	2
Preparation of teaser	2
Castration	2
Urinary system: Affection of kidney	2
Affection of ureter	2
Affection of urinary bladder	2
Affection of urethra	2
Affection of teat and udder	2
Ear surgery	2
Eye surgery	2
Total	**30**

SURGERYpart4/PracticalSubjects

PRACTICALSubject	Hours
Teatfistula	4
Nephrectomy	4
Ovariohysterectomy	4
CystotomyandCystectomy	4
UrethrostomyandUrethrotomy	4
Splenectomy	4
Rumenotomy	3
Ophthalmicsurgery	3
Total	**30**

Subject: RESEARCH PROJECTS

FIFTH Year

SUBJECT CREDITS

Theoretical	**1**	Hours	**1**	Units
Practical	**1**	Hours	**1**	Units
TOTAL	**2**	Hours	**2**	Units

MARK DETAILS

	Course Exam Marks	Discussion of the research
Theoretical	20	
Practical		80
TOTAL	20	80

RESEARCHPROJECTS/TheoreticalSubjects

First semester

THEORETICAL Subject	Hours
Research methods and hypothesis testing	3
Defining problems	3
Designing study	3
Data management	3
Writing reports	3
Total	**15**

Secondsemester

PRACTICALSubject
The studentsconducts aresearch projectandsubmits thework fordiscussion.

Curriculum Summary for Fifth Year Subject / First semester

No.	Subjects	Credits	Theoretical	Practical	Total
1	Fish diseases	Units	2	1	3
		Hours	2	2	4
2	Male fertility and artificial insemination	Units	1	1	2
		Hours	1	2	3
3	Veterinary clinic / part 4	Units	-	7	7
		Hours	-	14	14
4	Internal medicine / part 3	Units	3	-	3
		Hours	3	-	3
5	Meat hygiene	Units	2	1	3
		Hours	2	2	4
6	Surgery / part 3	Units	2	1	3
		Hours	2	2	4

Total Subjects: 6 Total Units: 21 Total Hours: 32

Curriculum Summary for Fifth Year Subject / Second semester

No.	Subjects	Credits	Theoretical	Practical	Total
1	Reproductive biotechnology	Units	1	1	2
		Hours	1	2	3
2	Veterinary clinic / part 5	Units	-	6	6
		Hours	-	12	12
3	Veterinary Ethics	Units	1	-	1
		Hours	1	-	1
4	Internal medicine / part 4	Units	3	-	3
		Hours	3	-	3
5	Food hygiene	Units	2	1	3
		Hours	2	2	4
6	Veterinary forensic pathology	Units	1		1
		Hours	1		1
7	Surgery / part 4	Units	2	1	3
		Hours	2	2	4
8	Research projects	Units	1	1	2
		Hours	1	2	3
9	Summer clinic	Units	-	3	3
		Hours			

Total Subjects: 9 Total Units: 24 Total Hours: 30

The total curriculum

No.	Years		First semester	Second semester	Total
1	First year	Subjects	8	8	16
		Units	19	20	39
2	Second year	Subjects	6	7	13
		Units	22	22	44
3	Third year	Subjects	6	6	12
		Units	22	21	43
4	Fourth year	Subjects	8	9	17
		Units	22	24	44
5	Fifth year	Subjects	6	9	15
		Units	21	24	45
	Total	Subjects	34	39	73
		Units	106	111	217