ANDHRAUNIVERSITY
B.VocationalcourseDairyi
ng & Animal husbandry
IIYear–SemesterIV2020-
21Admittedbatch

INFECTIOUSDISEASESOFLIVESTOCKANDPOULTRY

(Credits4+2=6)

UNIT-1

Itiology,symptoms,diagnosisandtreatmentofvariousViraldiseasesoflivestock,petsa ndpoultry

UNIT-2

Itiology,symptoms,diagnosisandtreatmentofvariousBacterialdiseasesoflivestock,pet sandpoultry

UNIT-3

Itiology,symptoms,diagnosisandtreatmentofvariousParasiticdiseasesoflivestock,pet sandpoultry

UNIT–4

Itiology,symptoms,diagnosisandtreatmentofvariousFungaldiseasesoflivestock,petsa ndpoultry

UNIT–5

Itiology,symptoms,diagnosisandtreatmentofvariousDiseasescausedbyectoparasites oflivestock,petsandpoultry

PRACTICALS

Postmortemexaminationofdifferentdiseasesandtheirinterpretation.Studyofgr ossspecimensandhistopathologicalslidesofvariousorganspertainingtoinfecti ousandnon-
infectiousdiseasesofdomesticanimals.Demonstrationofcausativeagentsintis suesectionbyspecialstainingmethodsanduseofrapiddiagnostictests

BOOKSFORREFERENCE

1. Textbookofpreventiveveterinarymedicine
   Dr.Amalenduchakarvarthi
2. InfectiousdiseasesoflivestockS.V.PunditandV.V.Deshmukh
3. ATextbookOfVeterinarySpecialPathologyInfectiousDiseasesOfLivest ockAndPoultry2005EditionbyVegadJL,IBDCPublishers
4. AdvancedPathologyAndTreatmentOfDiseasesOfPoultryCDN Singh,
5. PoultryDiseasesAGuideforFarmersandPoultryProfessionalsVega dJ.L

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II Year – Semester IV2020-21Admittedbatch
IINFECTIOUSDISEASESOFLIVESTOCKANDPOULTRY
(Credits 4+2=6)Modelpaper

Time:3hrs Maximum:75marks

SECTION–A

Answeranyone**FIVE**questions.Eachquestioncarriesequalmarks. (5*5=25)

1. DescribeEtiology,Transmission,Symptoms andcontrolofFootandMouthDisease.
2. DescribeEtiology,Transmission,SymptomsandcontrolofBluetongueinsheep.
3. WritenoteonAscariosisincalves.
4. DescribeindetailaboutTrypanosmiosis(Surra)inlargeruminants..
5. EnlistcommonEndoparasiticdiseasesofbovineandsmallruminants
6. Writedewormingscheduleandprophylacticvaccinationscalendarinlargeruminants.
7. Writeaboutsymptomsofrabiesincattleandcontrol.
8. ListoutcommonViral,BacterialandProtozoandiseasesofcattleandbuffalo.

SECTION–B

Answer**all**questions.Eachquestioncarries**TEN**marks (5*10=50)

1. WriteadetailednoteonHaemorrhagicsepticaemiainbuffaloes.

   (or)

   NarrateBrucellosisincattle.
2. Write in detail about Theileriosis incross breed cattle includingprophylaxis

   (or)

   WriteindetailaboutBabesiosiscattleincluding.
3. ExplainEtiology,Symptoms,lesions,andcontrolofEnterotoxaemia(ET)insheep

   (or)

   ExplainEtiology,Symptoms,lesions,andcontrolofPPRinsheep&Goat.
4. GiveclassificationofAntibioticsusedinveterinarymedicine.

   (or)

   EnlistcommonDewormingdrugsandEctoparasiticideusedinveterinarymedicine.
5. NarrateEtiology,Symptoms,post-mortemlesionsandcontrolofRanikhetdisease(ND)inpoultry.

   (or)

   Explainhowtocontrolinfectiousdiseaseoutbreaksystematicallyatfieldlevel.

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B.VocationalcourseDairyi ng & Animal husbandry
IIYear–
SemesterIV<u>VETERINARYIMMUNOLOGYANDV ACCINES</u>

(Credits4+2=6)

<u>UNIT-1</u>

HistoryofImmunology-Lymphoidorgans,tissuesandCells-TypesofImmunity

<u>UNIT-2</u>

Hypersensitivity:classificationandmechanismofinduction;

<u>UNIT-3</u>

Autoimmunity;ImmunotoleranceC

<u>UNIT-4</u>

onceptofImmunitytoMicrobes

<u>UNIT-5</u>

Vaccines-
preparation,storage,safetyandmaintenanceVaccinationschedulesofdiff erentlivestock,poultryandpetanimals.

Practicals

VisitandappraisalofVeterinarybiologicalinstitute.Demo nstrationofvariouslivestockandpetvaccines.
Toattendvaccinationprogrammesinfieldandcommercialpoultryfarms.

<u>Referencebooks:</u>

1. VeterinaryImmunology — IanRTizard,Else vierScience
2. Immunology:BasicConceptsandApplications — Y.Haribabu
3. VeterinaryImmunology:Principles&Practice — Day,Manson Pub
4. VaccinesforVeterinarians — IanRTizard
5. VaccineScienceAndImmunizationGuideline — ROCKWELLP G,SPRINGER

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VETERINARYIMMUNOLOGYANDVACCINES
(Credits4+2=6)Mo
delpaper

Time:3hrs Maximum:75marks

SECTION–A

Answeranyone**FIVE**questions.Eachquestioncarriesequalmarks. (5*5=25)

1. What are abtibodies? Differentiate between different classes of antibodies.
2. What is the role of thymus, bone marrow, bursa of fabricius in the immune system?
3. write in detail about lymph nodes, location and functions.
4. write in detail about cells of immunity.
5. write in detail about biological barriers.
6. write in detail differences between B & T- Lymphocytes.
7. what is phagocytosis? Explain.
8. write down vaccination schedule in Bovines

SECTION–B

Answer**all**questions.Eachquestioncarries**TEN**marks (5*10=50)

1. Write about different portals of entry of infection and local defense mechanism.
   (or)
   What are different types of immunoglobulins. Write their functions in detail.
2. Write in brief about historical significant achievements in immunology.
   (Small pox vaccine-Edward jenner, Rabies vaccine-Louis pastuer etc.)
   (or)
   Writeindetailabout types of immunity.
3. What is an antigen. Draw diagram of antigen and write down its functions.
   (or)
   Write down vaccination schedule in layers and broilers.
4. What is vaccine. Write in detail about storage, safety and maintenance of vaccines.
   (or)
   Write the differences between live attenuated vaccines and killed vaccines
5. Give a detailed account of vaccination of sheep and goat
   (or)
   What are the different types of hypersensitivity? Give one example for each.

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ng & Animal husbandry
IIYear–SemesterIV
MILKANDMILKPRODUCTSTECHNOLOGY
(Credits4+2=6)

UNIT–1

MilkindustryinIndia,milkprocessingunitanditsmanagementCompo
sition&Nutritivevalueofmilk
FactorseffectingcompositionofmilkPh
ysio-chemicalpropertiesofmilk

UNIT–2

Collection,chillingofmilk
Standardisationofmilk-
pasteurisation,homogenisation,bactofugation,dehydrationofmilk

UNIT-3

Introductiontofunctionalmilkproducts.Preparationofcream,butter,paneerorchan
na,ghee,khoa,lassi,dahi,ice-cream,mozzarellacheeseanddairybyproducts.
Commondefectsofmilkproductsandtheirremedialmeasures.

UNIT-4

Packaging,transportation,storageanddistributionofmilkandmilkproducts.Goodmanuf
acturingpracticesandimplementationofHACCPinmilkplant.Organicmilkproducts.

UNIT-5

Foodsafetystandardsformilkandmilkproducts.

PRACTICALS

Visittomodernmilkprocessingandmilkproductsmanufacturingplants.Samplin
gofmilk.estimationoffat,solidnotfat(SNF)andtotalsolids.
Platformtests.Crea
mseparation.
Detectionofadulterationofmilk.Determinationof
efficiencyofpasteurization.
Preparationofmilkproductslikeghee,paneerorchanna,khoa,ice-
creamorkulfi,milkbeverages.

Referencebooks:

1. TextBookonMilk&MilkProducts — RanveerRC,Kamble DK,Patange
2. MILKANDMILKPROCESSING — HerringtonB.L.
3. MilkandMilkProducts — H.VarnamAlan
4. PrincipleofDairyProcessing. — WarnerJamesN

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MILKANDMILKPRODUCTSTECHNOLOGY
(Credits4+2=6)Mo
delpaper

Time:3hrs Maximum:75marks

SECTION–A

Answeranyone**FIVE**questions.Eachquestioncarriesequalmarks. (5*5=25)

1. Write about composition of milk and also factors effecting composition of milk.
2. Write down physio-chemical properties of milk.
3. Write about collection and chilling of milk.
4. Write about common defects of milk products and their remedial measures.
5. Write down food safety standards of milk and milk products.
6. Expand HACCP and importance of HACCP measures in milk plant.
7. Write about organic milk products.
8. Write in detail about cream separation.

SECTION–B

Answer**all**questions.EachquestioncarriesTEN**marks** (5*10=50)

1. Write in detail about scope of Milk industry in India.

(or)

Write in detail about milk processing unit and its management.

2. Writeindetailabout adulteration of milk and tests for detection of milk adulteration.

(or)

Write in detail about sampling of milk estimation of fat, solid not fat (SNF) and total solids.

3. Write down the procedure of preparation of milk products like ghee, paneer or channa, khoa, ice cream.

(or)

Write down the procedure of preparation of milk products like cream, butter, mozzarella cheese, lassi, dahi .

4. What is Standardization of milk write in detail.

(or)

Write about packaging, transport, storage and milk and milk products.

5. Write in detail about good manufacturing practices of milk.

(or)

Write in detail about platform tests.

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MEATPRODUCTIONANDABATTOIRPRACTICES

(Credits4+2=6)

UNIT-1

ProspectofmeatindustryinIndia.Nutritivevalueofmeat.

UNIT-2

Preservationofmeatandpoultry;drying,salting,curing,smoking,chilling,freezing,canning,irradiationandchemicals.Ageingofmeat.

UNIT-3

Modernprocessingtechnologiesofmeatandmeatproducts.Packagingofmeatandmeatproducts.Formulationanddevelopmentofmeat;kabab,sausages,meatballsorpatties,tandoorichicken,soup,pickles

UNIT-4

Layoutandmanagementofrural,urbanandmodernabattoirs.
HACCP concepts in abattoir management. FSSA standards on organizationand layout of abattoirs. Animal welfare and pre-slaughter care, handling andtransportofmeatanimalsincludingpoultry.

UNIT-5

Procedures of Ante-mortem and post mortem examination of meat animals.Slaughteringanddressingofmeatanimalsandbirds.
Evaluation,gradingandfabricationofdressedcarcasses

PRACTICALS:

Visittoslaughterhousesormeatplants.
Packaging of meat, poultry and shell eggs and their products.Estimationofdeteriorativechangesinmeatandmeatproducts.
Preparation of comminuted and non comminuted meat and poultry products.Evaluation of external and internal egg quality and preservation technique ofeggs
Methods ofritual and humane slaughter, flaying anddressing offoodanimalsincludingpoultry.
Carcassevaluation.
Determinationofmeatyield,dressingpercentage,meatboneratioandcutupparts.
Preparationofdifferentabattoirbyproducts.

Referencebooks:

1. TextbookOnAbattoirPractices&AnimalByproductsTechnologyJSahoo,MKChatli
2. ModernAbattoirPractices&AnimalByproductsTechnologySharma
3. TextBookonAbattoirPracticesandAnimalByProductsTechnologyJhariSahooandManishKumarChatli
4. AbattoirPracticesBy-ProductsAndWoolTechnologyVPSinghandNeelamSachan

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MEATPRODUCTIONANDABATTOIRMANAGEMENT
(Credits4+2=6)Modelpaper

Time:3hrs Maximum:75marks

SECTION–A

Answeranyone**FIVE**questions.Eachquestioncarriesequalmarks. (5*5=25)

1. Write in detail about nutritive value of meat.
2. Explain ageing of meat.
3. Write in detail about packaging of meat and meat products.
4. What is HACCP? Write about concepts of HACCP in abattoir management.
5. Explain salting, curing, freezing, canning.
6. Write about evaluation and grading of carcass.
7. Write about slaughtering and dressing of birds.
8. Write about pre-slaughter care of animal and birds.

SECTION–B

Answer**all**questions.Eachquestioncarries**TEN**marks (5*10=50)

1. Write in detail about prospect of meat industry in India.
   (or)
   Write in detail about preservation of meat & poultry.

2. Writeindetailabout modern processing technologies of meat and meat products.
   (or)
   Write in detail about different formulations and development of meat.

3. Whatis the procedure of Ante-mortem examination of meat animals. Write in detail.
   (or)
   Whatis the procedure of Post-mortem examination of meat animals. Write in detail.

4. What are the FSSA standards on organization and layout of abattoirs.
   (or)
   Write about layout and management of rural, urban and modern abattoirs.

5. Write in detail about methods of ritual and humane slaughter, flaying and dressing of food animals.
   (or)
   Write in detail about handling and transport of meat animals and poultry

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PRINCIPLESOFDAIRYCHEMISTRYANDDAIRYMICROBIOLOGY

(Credits4+2=6)

UNIT-1

Nutritional importance – Introduction - Milk Composition Milk Constituents - FactorsAffectingtheCompositionofMilkFlavoursandOff-FlavoursRelatedto Milk NutritiveValueofMilk

UNIT-2

physio-chemicalpropertiesofmilk-Objectives–Introduction-DensityandSpecificGravity-ViscositySurface-Tension-RefractiveIndex

UNIT-3

FreezingPoint-BoilingPoint-SpecificHeat-Acidity-Ph-BufferingActionOxidation-Reduction-preservatives,neutralizersandadulterantsinmilkandtheirdetection-thermalprocessingofmilk

UNIT-4

HeatProcessingofMilk-EffectofHeatonMilk-FreezeProcessingofMilk -EnzymesinRelationtoProcessing

UNIT–5

Introductiontomicrobiology-Microorganismsfoundinmilk-Bacteria-Virus – Fungi – significance of micro organisms in the context of dairyindustry – enumeration of different types of micro organisms commonlyfoundinmilk–theirgrowthcharacteristics.

PRACTICALS:

Assessingthechemicalcompositionofmilksamples.Asse ssingthenutritivevaluesofmilksamples.
Enumerationofdifferentmicroorganismscommonlyfoundinmilk.Usageofp ycnometerandlactometer.
Usageofrefractometer.

Referencebooks:

Jenness RandPatton S.(1959)Principles ofDairy
ChemistryLingE.R.(1956)AtextBookofDairyChemistryVol1&2Londo n.
WebbB.H.andJohnson,A.H(1979)FundamentalsofDairyChemistry,Rai,M.M .(1964)DairyChemistryandAnimalNutrition,
MathurM.P.DattaRoy,D,andDinakar(1999)

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ng & Animal husbandry
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PRINCIPLESOFDAIRYCHEMISTRYANDDAIRYMICROBIOLOGY
(Credits4+2=6)Mod
elpaper

Time:3hrs Maximum:75marks

Section-A

AnsweranyFIVEquestions.Eachquestioncarriesequalmarks. (5x5=25)

1. Givethecompositionofcowandbuffalomilk.
2. Explainindetailphysio-chemicalpropertiesofmilk.
3. Explainindetailaboutfreezingpoint&boilingpointofmilk.
4. Explainhowcolostrummilkisdifferentfromnormalmilk?5.Stat ehydrolyticrancidityanditscontrol.
6. Giveinbriefaboutfactorsaffectingthecompositionofmilk.
7. Explainaboutthermalprocessingofmilk.
8. Enumerateindetaildifferenttypesmicroorganismsfoundinmilk.

Section–B

Answerallthequestions.EachquestioncarriesTENmarks(5x10=50)

1. Indicatethegrowthcharacteristicvariousmicrobesinmilk.
   (or)
   Explainindetailthesignificanceofmicrobesinthecontextofdairyindustry.
2. Writeindetailaboutfreezeprocessingofmilk&effectofenzymesonit.
   (or)
   Writethebacterial&viralcontaminantsofmilk?

3. Whatistheproceduretoassessthechemicalcompositionofmilksamples.
   (or)
   Explainindetailtheusageofpycnometerandlactometer

4. Whatisbufferingaction.Explainindetail.
   (or)
   Explainindetailaboutpreservatives,neutralisersandadulterantsinmilk

5. Whatisheatprocessingofmilk.Explaineffectofheatonmilkindetail.
   (or)
   Explainindetailaboutthedensityandspecificgravityofmilk

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LABORATOARYDIAGNOSTICTECHNIQUES

Credits(4+2=6)

UNIT-1

Microscopeandusageofdifferentmicroscopes.Ster ilizationandmethodsofsterilization.

UNIT-2

Media – various ingredients used for preparation of culture media.Differentmedia for bacterial and fungal cultures. Tissue cultures Various stains anddyesusedfordiagnosticwork.Differentstainingmethods.

UNIT-3

Antigens and antibodies.Serodiagnostic technics used for identification ofantigen/antibody.

UNIT-4

Methodsofpreparationofpermanentslides.Collection,preservationanddespatchof variousmaterialsforparasitologicalexaminations.

UNIT-5

Examinationofparasiticspecimens.Examinationofpathologicalspecimens.Haem atologicalexaminations.Biochemicalanalysis.

PRACTICALS

Identificationofglasswarechemicalsandlaboratoryequipment.Prep arationofnormalandstandardsolutions.
Samplespreparationforchemicalanalysis.
Preparationofslidesforparasiticandpathologicalexaminations.Staini ngproceduresfordifferentspecimans.
Collectionandprocessingofspecimansforclinicalexamination.Clinic alhaematology
Preparationofpermanentslidesandmuseumspecimans.

Referencebooks:

1. VeterinaryLaboratoryDiagnosis — ChauhanRS
2. VeterinaryLaboratoryDiagnosis — Sriraman
3. Veterinary Technician's Handbook of Laboratory ProceduresBrianneBellwoodand.MelissaAndrasikCatton,JohnWiley
4. VeterinaryLaboratoryMedicineClinicalBiochemistryandHae matologyMoragG.Kerr,JohnWiley
5. Veterinaryclinicaldiagnostictechnology — PrasadB

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LABORATORYDIAGNOSTICTECHNIQUES
(Credits4+2=6)Mod
elpaper

Modelpaper

Time:3hrs Maximum:75marks

SECTION–A

Answerany**FIVE**questions.Eachquestioncarriesequalmarks. (5*5=25)

1. Write about microscope and usage of microscope.
2. Write about different staining methods.
3. Write about different media for bacterial and fungal cultures.
4. Write in detail about antigens and antibodies.
5. Write down the differences between antigen and antibody.
6. Write in detail about hematological examination.
7. Write in detail about biochemical analysis.
8. Write about collection and preservation of specimens.

SECTION–B

Answer**all**questions.Eachquestioncarries**TEN**marks (5*10=50)

1. Write in detail about sterilization and also different methods of sterilization.
(or)
Explain various ingredients used for preparation of culture media.

2. Write in detail about different staining methods.
(or)
Write in detail about different tissue culture stains and dyes used for diagnostic work.

3. Write in detail about examination of parasitic specimens.
(or)
Explainexamination of pathological specimens.

4. Whatare the different serodiagnostic techniques used for identification of antigen/antibody.
(or)
Explainindetailaboutpreparation of permanent slides.

5. Write about collection and processing of specimens for clinical examination.
(or)
Explainindetailaboutstaining procedures of different specimens.