



SRI VENKATESWARA UNIVERSITY, TIRUPATHI

4 -Year UG Honours in B.vocational (Dairy and Animal Husbandry) Major in Consonance with Curriculum Frame work w.e.f AY 2026-27

COURSE STRUCTURE (for Semester IV)

Year	Semester	Course	Title of the course	No.o f hrs/ week	No.of credits
II	IV	8	Veterinary physiology (theory)	3	3
			Veterinary physiology (practical)	2	1
		9	Laboratory Diagnostic & Techniques (theory)	3	3
			Laboratory Diagnostic & Techniques (practical)	2	1
		10	Veterinary Gynacology & AI(Artificial insimulation)(theory)	3	3
			Veterinary Gynacology & AI (Artificial insimulation) (practical)	2	1

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Chittoor - 517 044

SEMESTER-IV

COURSE 9 : LABORATORY DIAGNOSTIC & TECHNIQUES

Theory	credits-3	3hrs/week
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LEARNING OUTCOMES

After completion the course student able to

- 1.Ability to safely and correctly collect and process biological specimens, operate and maintain lab equipment
- 2.Perform routine and advanced tests, analyze and interpret results and apply scientific principles to solve problems and ensure quality control.

UNIT -I

9 hrs

Microscope and usage of different microscopes .
Sterilization and methods of sterilization .

UNIT -II

9 hrs

Media - various ingredients used for preparation of culture media . Different media for bacterial and fungal culture varies stains and dyes use for diagnostic work different staining method

UNIT -III

9 hrs

Antigens and antibodies . serio diagnostic techniques used for identification of antigen/antibody.

UNIT -IV

9 hrs

Methods of preparation of permanent slides. Collection, preservation and dispatch of various materials for parasitological examinations .

UNIT -V

9 hrs

Examination of parasitic specimens . Examination of pathological specimens .
Heamatology examinations . Biochemical analysis

SEMESTER-IV

Course 9 : LABORATORY DIAGNOSTIC & TECHNIQUES

Practical _____ credits -1 _____ 2-hrs/week

1. Identification of glass ware chemicals and laboratory equipment.
2. Preparation of normal and standard solutions .
3. Samples preparation for chemical analysis.
4. Preparation of slides for parasitic and pathological examinations.
5. Staining procedures for different specimens.
6. Collection and processing of specimens for clinical examination.
7. Clinical hematology .
8. Preparation of permanent slides and museum specimens.

Reference books:

1. Veterinary laboratory diagnosis Chauhan RS
2. Veterinary laboratory diagnosis Sriraman
3. Veterinary Technician's Handbook of Laboratory procedures Brainne Bellwood and Melissa Andrasik Catton , John Wiley
4. Veterinary Laboratory Medicine Clinical Biochemistry and Hematology Morag G . Kerr , John Wiley
5. Veterinary clinical diagnostic technology Prasad B

MODEL QUESTION PAPER

course : B. Voc Dairy & Animal Husbandry

LABORATORY DIAGNOSTIC & TECHNIQUES

Time: 3 hours

Marks: 75

SECTION – A

Answers any five of the following question . Each question carries equal marks 5X3=15

1. What are the different types of microscopes used in laboratory diagnostics ?
2. Define sterilization and list different sterilization methods ?
3. What are the main ingredients of culture media ?
4. Name different types of media used for bacterial culture
5. Define antigen and antibody with examples?
6. What is the principle sero-diagnostic technique?
7. What are the steps in preparing a permanent slide?
8. How should parasitological samples be collected and preserved ?
9. What are the common techniques used for the examination of parasitic specimens ?
10. How is a hematological examination performed in a diagnostic lab ?

SECTION –B

Answers All the question .Each question carries equal marks

5X12=60

11. a) Describe in detail the different types of microscopes their application in laboratory diagnostics

(or)

b) compare and contrast dry heat sterilization and moist heat sterilization

12.a) Explain the classification of culture media and their role in microbial growth

(or)

b) How do staining methods helping the identification of bacteria and fungi

13.a) Describe different sero – diagnostic techniques used for antigen /antibody identification

(or)

b)Discuss the principles and applications of ELISA and western blotting

14.a) Explain the procedure for preparing permanent slides for laboratory use

(or)

b) Discuss the importance of parasitological examination in veterinary diagnostics

15.a) Explain the different hematological techniques used for diagnosing diseases

(or)

b) discuss the significance of examination pathological in specimens in veterinary science

4- Year UG Honours, Major

Syllabus

(2026-27)

