Enrollment No. _____

NAVRACHANA UNIVERSITY
a UGC recognized University

School: School of Science
Program/s: MSC LS
Year: 2nd **Semester:** 3rd
Examination: End Semester Examination
Examination year: December 2022

Course Code: LS209 **Course Name:** Animal Nutrition and Health Management
Date: 06/12/2022
Time: 11:30 am to 1:30 pm
Total Marks: 40
Total Pages: 2

Instructions:

- *Write each answer on a new page.*
- *Use of a calculator is permitted/not permitted.*
- ** COs=Course Outcome mapping. # BTL=Bloom's Taxonomy Level mapping*

Q. No.	Details	Marks	COs*	BTL#
Q.1	**Do as directed** 1) Removal of CO2 and methane gas can be released by the ruminant organism by feaces. True or False and Justify 2) Define flux or flow. 3) Explain role of feed additives. 4) Comment on the rumen environment. 5) *"Milk does not help in rumen development"* Comment 6) Name any one viral disease seen in ruminant organisms.	**6**	CO1,CO2, CO3, CO4	BT1, BT2, BT3
Q.2	**Answer the questions in brief (7*2=14)** 1) Mention sources for unsaturated and saturated fat? Which one is considered bad for animal health and why? 2) What is cannulation and is it helpful? 3) State any two natural sources releasing cyanogenetic glycosides 4) What is total Digestible Nutrients? 5) What is dry cow? 6) Mention the basic steps related to transfaunation. 7) State formula for calculation of retention time of digesta particles.	14	CO1,CO2, CO3, CO4	BT1, BT2, BT3
Q.3	**Answer the questions in detail (4*5=20) (any 4)** 1) Make a flow chart explaining procedure for investigating protein content in soybean meal. 2) List out steps for Silage making and state advantages of silage. 3) Explain Chemical method for treatment of feeds and fodder and state their significance. 4) Draw a neat labelled diagram of ruminant stomach and explain rume context to its role in digestion kinetics. 5) Make a note of microbes residing in the ruminant and non-ruminant organisms, provide the benefits and disadvantages attributed to these microbes.	**20**	CO1,CO2, CO3, CO4	BT3

**********End of Question Paper**********