ST.JOSEPH’S COLLEGE FOR WOMEN (AUTONOMOUS), VISAKHAPATNAM

IV SEMESTER **ZOOLOGY**  TIME:2HRS/WEEK

Z 4553 (2) **ANIMAL PHYSIOLOGY, CELLULAR METABOLISM AND EMBRYOLOGY** MAX.MARKS:50

w.e.f. 2020-2021 (20AH) **PRACTICALS**

**LEARNING OBJECTIVES: To enable the students to**

* + Develop skill in Identification of an organ system with histological structure
  + Identify the various biomolecules of tissues by simple colorimetric methods and also quantitative methods.
  + Identify and illustrate the different stages of early embryonic development in animals
  + Develop basic laboratory skills in the field of Physiology

**COURSE OUTCOMES:** By the end of the course, students will be able to

CO1. Perform physiology experiments following standard protocol.

CO2. Summarize the different developmental stages in frog.

CO3. Develop collaborative working skills.

CO4.Identify and discuss the structure of various organs.

# ANIMAL PHYSIOLOGY

* 1. Qualitative tests for identification of carbohydrates, proteins and fats.
  2. Study of activity of salivary amylase under optimum conditions.
  3. T.S. of duodenum, liver, lung, kidney, spinal cord, bone and cartilage
  4. L.S. of heart

# CELLULARMETABOLISM

* 1. Estimation of total proteins in given solutions by Lowry‟s method.
  2. Estimation of total carbohydrate by Anthrone method.
  3. Qualitative tests for identification of ammonia, urea and uric acid.
  4. Structure of cardiac muscle, smooth muscle.

# EMBRYOLOGY

1. T.S. of testis & ovary of a mammal
2. Study of different stages of cleavages(2,4,8cellstages) of frog.
3. Construction off ate map of frog blastula.

# REFERENCEBOOKS:

* + Harper‟s Illustrated Biochemistry
  + Cell and molecular biology: Concepts & experiments. VIEd. John Wiley& sons. Inc.
  + Lab Manual on Blood Analysis and Medical Diagnostics, S. Chand and Co.Ltd.
  + Laboratory techniques by Plummer.

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