

Bsc. 3rd year Test Examination 2015
ZOOLOGY HONOURS

Full Marks: 100

Time: 4 Hours

Answer Question No. 1 and any Eight questions from the rest

- I. Answer **any ten** of the following: 10 × 2 = 20
- a) What do you mean by Split gene?
 - b) Explain-Xerosere.
 - c) Name your State bird and State mammal.
 - d) What is Minamata disease?
 - e) What is bioenergetic web?
 - f) What is Allopatric speciation?
 - g) Distinguish between Deme and Cline.
 - h) What is SOS repair?
 - i) Name four species of *Leishmania*.
 - j) What are the control measure of Ascaris?
 - k) What is Primary and Definitive host ?
 - l) What is RFLP?
 - m) What is haemoglobinopathy?
 - n) What is Hybrid dysgenesis?
 - o) What is Proto onco gene and it's example?
 - p) What is metapopulation?
 - q) What is nomen nudum?
 - r) What do you mean by Neotype?
 - s) What do mean by Zeitgaber?
 - t) State the names of two common poultry breeds in India.
 - u) What is zoonosis?
 - v) Define agglutination and precipitation.

- Q.2 a Explain the Y shaped energy flow model.
b. Distinguish between r selection and k selection
c. Define biotic community.
d. What is natality and mortality. 4+2+2+2=10

- Q.3. Classify different types of bacteria found in milk according to the temperature gradation. What is pasteurization? Mention the method of preparation of cheese. 4+2+2= 8

- Q.4.a. What is complementation test?
b. Role of Cyclic AMP in Lac operone.
c. How to construct cDNA library. 2+3+5=10

Q.5. What is nerve impulse? Illustrate the ionic basis of the formation of action potential. Discuss the conduction of impulse through a chemical synapse. $1+4+3=8$

Q.6. Describe the different histological layers of retina with a suitable diagram. Give the structural and functional dissimilarities between rods and cones. $5+3=8$

Q.7 Draw and label the structure of a mammalian nephron. Discuss the counter current mechanism for formation of concentrated urine in kidney. $3+5=8$

Q.8. Describe the ultrastructure of skeletal muscle fibre. Discuss the role of calcium in muscle contraction. $4+4=8$

Or

Describe the mechanism of thermoregulation in desert mammals or in arctic mammals. Define poikilothermous and homeothermous animals. $6+2=8$

Q.9. What is meant by oxygen dissociation curve? What is chloride shift? What is Michaelis- Menten constant? Explain the phenomenon..... $2+2+1+3=8$

Q.9. What do you mean by exotic fishes? Explain the role of exotic fishes in polyculture. Write down the advantages of induced breeding in carp culture. $2+4+2=8$

Q. 10. Name a bacterial, viral and a protozoa disease of silk moth. Mention their symptoms and preventions. State the composition of honey. $1+5+2=8$

Q.11. Define IPM. Mention different bio ecological control methods of pests. $2+6=8$

Q.12. Write a short account on the biology and nature of damage caused by a common vegetable pest studied by you. Describe the deep litter system of poultry housing. $3+2+3=8$

Q.13. Name the causative agent of Filariasis. Describe its life cycle with suitable diagram. State the pathogenecity of Cholera. $1+5+2=8$