5/10/19

S.Y.BSc. Semester IV Examination ATKT
Zoology Paper I USZO401

All Questions are compulsory.
Figures to the right indicate full marks.
Draw neat and labelled diagrams wherever necessary.
Time: 3 hours **Total marks: 100**

5 Marks

Q.1. a) Fill in the blanks.

1. The modern theory of origin of species is knowm as _____ .(Lamarckism, Neo Darwinism,)
2. The relative frequency of an allele in a given mendelian population is called as _____.(Allele frequency, genotype, phenotype)
3. _____ type of fossils in which only hard remains of organism get preserved while the soft part decay.. (Petrification, compression, impression)
4. _____ type of speciation is intermediate between allopatric and sympatric populations .(petripatric,parapatric,speciation)
5. _____is a tendency which does not permit an impartial consideration of a problem. (Induction, bias,research)

b) Match the column **5 Marks**

1. Endosymbiotic theory	*a.* Crossing over
2. Fossils	b. Deduction
3. Germ plasm theory	c. Weismann
4. Exchange of genetic material	d. Lynn Margulis
5. Top to down approach	e. Paleontology

c) Write true or false. **5 marks**

1. Genotype is a combination of alleles occupying same locus.
2. If a part of a chromosome breaks and joins other non homologous chromosome called translocation.
3. Anasthetia are described in the guidline of INSA.
4. The impression which are left due to burying organism under high pressure called cast or moulds.
5. Clinical research involves human subject for obtaining useful knowledge about human health, illness and seeks new drugs and their trials.

d) Give one word for **5 marks**

1. Define Paleontology
2. Give full form of UGC.
3. Give a full form of PIC.
4. Define Allopatric speciation.
5. What is monograph

Q.2. A) Answer the following. (Any two) **20 Marks**

1. Discuss evidences in favor of organic evolution by giving examples of physiology and biochemistry.
2. Write explanatory notes on Darwinism and Neo Darwinism.
3. Describe chemical evolution with Miller-Urey experiment.
4. Discuss brief account of origin of eukaryotic cell.

Q.3. A) Answer the following. (Any two) **20 Marks**

1. . Compare and contrast microevolution and macroevolution.
2. What do you understand by the term natural selection? Describe the different types of natural selection with suitable examples.
3. State Hardy Weinberg's law of equilibrium and discuss its salient features
4. What is megaevolution? Explain the mechanism of megaevolution using a suitable example.

Q.4. A) Answer the following (Any two) **20 Marks**

1. Describe briefly, the steps towards preparing a research design.
2. What is a patent and how is it obtained?
3. Write an account on application of statistics in research.
4. Elaborate on ethics in clinical research.

Q.5. Write a short note on (Any four) **20 marks**

1. What is plagiarism?
2. What is abstract writing?
3. Founder effect
4. Role of mutations in evolution
5. Short notes on mutation theory
6. Forest department approval
7. Geographic variation
8. Vestigial organs