

B.N. Bandodkar College of Science, Thane

S.Y. B.Sc. ATKT/FALIURE Examination AUG- 2011

**Subject: Zoology
Paper II**

Duration: 03 hrs

Max Marks: 90

- 1. All questions are compulsory.**
- 2. Figures to right indicate full marks.**
- 3. Draw diagrams wherever necessary**
- 4. Answers to both the sections to be written in the same answer book.**

Q.1 A) Describe the molecular structure of water. **(03)**

Q.1 B) Write short notes on: (Any Three) (12)

- 1) Physical properties of water.
- 2) PH
- 3) Beta oxidation.
- 4) Essential and nonessential amino acids
- 5) Titration curve.

Q.2 A) Explain DNA replication. **(03)**

Q.2 B) Write short notes on: (Any Three) (12)

- 1) Initiation of transcription.
- 2) Characteristics of genetic code.
- 3) Structure of ribosome.
- 4) Aminoacylation.
- 5) Termination of translation.

Q.3 A) Explain factors affecting crossing over. **(03)**

Q.3 B) Write short notes on: (Any Three) (12)

- 1) Colorblindness
- 2) ZZ-ZW inheritance in birds.
- 3) ABO blood group.
- 4) Haplodiploidy.
- 5) Skin color in man

SECTION - II

Q.4 A) Explain the selection, screening and properties of donor genetic material. **(03)**

Q.4 B) Write short notes on: (Any Three) (12)

- 1) Genomic DNA probe
- 2) Adaptors.
- 3) Streaking
- 4) Plasmid pBR322
- 5) Scope of bioinformatics

Q.5 A) Explain the benefits of Bt toxin. **(03)**

Q.5 B) Write short notes on: (Any Three) (12)

- 1) Problems and controversies of golden rice

- 2) 2. Hepatitis virus
- 3) Restriction enzymes
- 4) NCBI
- 5) BLAST

Q.6 A) Describe Natural selection.

(03)

Q.6 B) Write short notes on: (Any Three)

(12)

- 1) Post zygotic isolating mechanism.
- 2) Allopatric speciation.
- 3) Macroevolution.
- 4) Significance of meiosis.
- 5) Change in chromosome number