

F.Y.BSc. Semester-I Examination

Zoology Paper-II

Course Code- USZO 102

12/12/23

Duration: 3.00 Hr.

Total Marks: 100

Note: 1) All questions are compulsory.

2) Draw the diagrams wherever necessary.

3) Figure at Right indicates marks.

Q1) A) Fill in the blanks

(05)

1. The transgenic salmon was created by manipulating the gene for _____.
(Growth Hormone, Estrogen, Adrenalin, Testosterone)
2. _____ is defined as the value of a variable which occurs most frequently.
(Standard deviation, Mode, Mean, Median)
3. The _____ serves to further magnify the real image projected by the objective in a compound microscope.
(stage, base, eyepiece, mirror)
4. Centrifuge uses the _____ force.
(gravitational, magnetic, kinetic, centrifugal)
5. The term Biotechnology was coined by _____.
(Karl Ereky, Dr. T.J. Pandian, Dr. Ian Wilmut, Robert Briggs)

B) Match the following

(05)

- | | |
|-------------------------------|-------------------|
| 1. Embryonic stem cell | A) ppt |
| 2. Parts per thousand | B) Insulin |
| 3. Resolution factor | C) Absolute Zero |
| 4. Kelvin scale | D) Mouse |
| 5. Recombinant DNA Technology | E) Chromatography |

C) True or False

(05)

1. Colorimeter works on the principle of Beer's and Lambert's Law.
2. Baker's yeast is used for making breads.
3. Celsius scale was developed by Gariel Daniel Fahrenheit.
4. Flammable chemicals do not catch fire easily.
5. DNA analysis can be done using gel electrophoresis.

D) Answer in one sentence

(05)

1. Define Mobile phase.
2. Types of central tendencies.
3. What is TLC?
4. Define sample.
5. What are Irritants?

Q2) Answer the following (Any 2)

(20)

1. Explain different types of sampling methods in detail.
2. Illustrate any 6 types of safety symbols and its uses.
3. Describe mean giving suitable example and add a note on its merits and demerits.
4. Explain the safe laboratory measures to be adopted by the students.

Q3) Answer the following (Any 2)

(20)

1. Define cloning. Explain with respect to cloning of Dolly.
2. Describe in detail Technique of DNA Fingerprinting.
3. Using a suitable diagram describe SCID.
4. Explain In-Vivo Gene Therapy for Cystic Fibrosis.

Q4) Answer the following

(20)

1. Describe the principle and applications of a compound microscope.
2. In detail explain paper chromatography as a separating technique.
3. What is Electrophoresis? Explain principle and application of PAGE.
4. Define pH. Give its principle and applications.

Q5) Write short Notes on (Any 4)

(20)

1. Molality.
2. Data and Variable.
3. Dissecting microscope.
4. DNA microinjection.
5. Normality.
6. Adsorption chromatography.
7. Types of bar graph
8. Green genes