F.Y. BSc
Sem - II - 2016-17
Sub - Zoology

Q.P. Code : 756700

(3 Hours) **Total Marks:100**

Note: 1) *All* questions are **compulsory.**
2) *All* questions carry **equal marks.**
3) *Draw* neat, labeled **diagrams** wherever necessary.

Q1. **A.** *Fill* in the blanks by choosing correct option given in the bracket. **05**

a) _____ is the gram molecular weight of solute dissolved in one kilogram of solvent.
(Motarity, Molality, Normality)

(b) Transgenic silk worm helps stabilizing silk level by _____ viral outbreak.
(Increasing, reducing, equalizing)

(c) The method of _____ involves fusion of blastomeres.
(Retroviral, Nuclear transplantation, DNA microinjection)

(d) Magnification of an image depends upon the _____ .
(size of object, magnification power of lens, source of light)

(e) The hydrogen ion concentration in biological system ranges from about _____ . (10^{-2}, $10^{-7.45}$, 10^{-15})

B. Match the column and rewrite. **05**

I		II	
a	Kilometer	i)	Green genes
b	Milligram	ii)	Violet colour absorbed by matter
c	Jelly fish	iii)	1000 m
d	400 nm wave length	iv)	10000 rpm
e	Clinical centrifuges	v)	0.001gm

TURN OVER

C. State whether True or False.

a) Kelvin scale is temperature scale having an absolute zero below which temperature does not exist.

b) Parts per millions denotes one part in 10^{-6} parts.

c) Dolly was created by transfer of nucleus from ovarian follicle of adult sheep.

d) The blood factor IX is transfected into sheep whose meat is used as food.

e) Dissecting microscope has an eyepiece & an objective lens. 05

D. Answer the following in one sentence.

a) Explain the term Population.

b) What is aerosol?

c) Give one application of medical biotechnology.

d) What is BKm DNA?

e) Write the different magnifications powers of the objectives.

Q2. A Describe any four safety symbols with respect to their meaning, type of hazards & precautions. 10

OR

A Explain non-probability sampling and its sub-types. 10

B Explain **any two** of the following: 10

a) Scope of Biostatistics.

b) Simple bar diagram with example.

c) Any two temperature scales.

d) Normality & molarity.

Q3. A Explain Ex vivo gene therapy with an example. 10

OR

A) Describe clonning with respect to Dolly. 10

B Write short notes on **any two** of the following: 10

a) Achievements of Industrial Biotechnology.

b) Nuclear transplantation method of transgenesis.

c) Dr. Lalji Singh and DNA finger printing.

d) Green fluroscent protein.

TURN OVER

Q4. Answer **any two** of the following:- **20**

a) Explain the principle & applications of colorimetry.
b) Describe principle & applications of pH meter.
c) What is chromatography? Explain with types.
d) Explain principles & applications of Electrophoresis.

Q5. Write short Notes on **any Four.** **20**

a) Mode for grouped data with suitable example.
b) Goals of metric system.
c) Achievements of biotechnology in the field of animal husbandry.
d) DNA microinjection method of transgenesis.
e) Construction & applications of disecting microscope.
f) Compound microscope mentioning its different parts.

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