

**2015**

( 3rd Semester )

**ZOOLOGY**

Paper : ZL-III

**( Evolution and Behaviour )**

*Full Marks : 55*

*Time : 2½ hours*

**( PART : B—DESCRIPTIVE )**

*( Marks : 35 )*

*The questions are of equal value*

1. Explain the principle of natural selection in high-altitude adaptation in humans.

*Or*

Discuss the rise and fall of industrial melanism in peppered moth.

2. Describe the origin of eukaryotic cells based on symbiogenesis.

*Or*

Illustrate Miller experiment in support of abiogenesis.

G16/59a

( Turn Over )

3. Describe the out of Africa theory.

Or

Narrate the development and concepts of continental drift theory.

4. Explain the principle of dancing in bees.

Or

Define and differentiate innate and learned behaviours.

5. Describe territoriality in animals and the types of territorial markers.

Or

Explain evolutionary arms race between any two groups of animals.

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( PART : A—OBJECTIVE )

( Marks : 20 )

*The figures in the margin indicate full marks for the questions*

SECTION—I

( Marks : 5 )

1. Put a Tick (✓) mark against the correct answer in the corresponding brackets : 1×5=5

(a) *Philosophie Zoologique* was written by

(i) Charles Robert Darwin ( )

(ii) Jean-Baptiste de Lamarck ( )

(iii) Alfred Russel Wallace ( )

(iv) Alfred Lothar Wegener ( )

(b) The name Dinosauria was coined by

- (i) William Buckland ( )
- (ii) J. B. S. Haldane ( )
- (iii) Alfred Wallace ( )
- (iv) Richard Owen ( )

(c) Use of fire was started by

- (i) *Australopithecus afarensis* ( )
- (ii) *Homo habilis* ( )
- (iii) *Homo erectus* ( )
- (iv) *Homo neanderthalensis* ( )

(d) Infrasound is a communication used by

- (i) elephants ( )
- (ii) chimpanzees ( )
- (iii) dolphins ( )
- (iv) microbats ( )

(e) A hormone responsible for intimacy and childbirth is

(i) estrogen ( )

(ii) melatonin ( )

(iii) oxytocin ( )

(iv) testosterone ( )

( 4 )

SECTION—II

( Marks : 15 )

2. Write short notes on the following in 5 to 8 sentences each : 3×5=15

(a) Allopatric speciation

(b) RNA world

(c) Cambrian explosion

2. Write short notes on the following in 200 words each:

(a) Allopatric speciation

(d) Aposematism

2015 (e) Paternal care

3rd Semester

ZOOLOGY

Paper ZOO-III

(Evolution and Behaviour)

(PART - A - OBJECTIVE)

(Marks: 20)

The figures in the margin indicate full marks for the questions

SECTION - I

(Marks: 5)

1. Put a Tick (✓) mark against the correct answer in the corresponding brackets

(i) *Philosophic Zoologica* was written by

(i) Charles Robert Darwin

(ii) Jean-Baptiste de Lamarck

(iii) Alfred Russel Wallace

(iv) Ernst Haeckel

(e) Paternal care

(i) William Burckhardt

(ii) J. B. S. Haldane

(iii) Alfred Wallace

(iv) Richard Owen

(f) Gas of fire is carried by

(i) *Austroplatystis africana*

(ii) *Homo habilis*

(iii) *Homo erectus*

(iv) *Homo neanderthalensis*

(g) Infrasonic is a communication used by

(i) elephants

(ii) chimpanzees

(iii) dolphins

(iv) microbes \*\*\*