

Total No. of printed pages = 5

3 (Sem 1) ZOO MI

2015 \*I

ZOOLOGY

(Major)

Paper : 1.1

Full Marks – 60

Time – Three hours

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

1. Choose the correct answer :  $1 \times 7 = 7$

- (a) Systematics deals with
- (i) Classification and Nomenclature.
  - (ii) Taxonomy and Evolution.
  - (iii) Identification and Classification.
  - (iv) Identification and Preservation.

[Turn over

- (b) *Systema Naturae* was written by
- Lamarck
  - Huxley
  - John Ray
  - Linnaeus
- (c) The species that are reproductively isolated but morphologically identical are referred as
- Cryptic species
  - Sibling species
  - Sympatric species
  - Allopatric species
- (d) Which of the following is not an intraspecific category ?
- Race
  - Subspecies
  - Deme
  - Tribe

- (e) One of the techniques of taxonomy is
- Chromatography
  - Electrophoresis
  - DNA Bar Coding
  - Karyotyping
- (f) Homologies are the features
- similar function
  - different structure
  - common ancestors
  - all of the above
- (g) Aristotle is credited with
- father of taxonomy
  - father of biological classification
  - father of genetics
  - author of 'Origin of Species'

2. Distinguish between :  $2 \times 4 = 8$

- Phenon and Taxon
- Alpha taxonomy and Beta taxonomy
- Monotypic species and Polytypic species
- Race and Cline

3. Write short notes on any three :  $5 \times 3 = 15$

- Homonymy
- Linnaean hierarchy
- Evolutionary species concept
- Binomial nomenclature
- Insect preservation

4. Why classification is necessary in the study of Biology ? Write the basic concept and demerits of the theory of 'Essentialism' in classification.

$2+5+3=10$

Or

Define taxonomy. Write about the importance of taxonomy in agriculture and wildlife management.

$2+4+4=10$

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5. What are the techniques of chemotaxonomy ? Write the biochemical approach in solving problems.

Or

Write about the process of typing and the necessity of type specimens.

6. What is taxonomic key ? State its use in taxonomic work. Write a note on Key.

Or

Give an account of the methods of collecting invertebrates. State the important collections.

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Total No. of printed pages = 4

3 (Sem 1) ZOO M2

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2015

ZOOLOGY

(Major)

Paper : 1.2

Full Marks - 60

Time - Three hours

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

[Animal Diversity (Non-cordate)]

1. Answer the following questions :  $1 \times 7 = 7$

- (a) What is cyclosis ?
- (b) Where mesenchyma is located in porifera ?
- (c) Name the reproductive zooid of obelia.
- (d) What is hermaphroditism ?

[Turn over



- (e) How many pairs of eyes present in leech ?
- (f) Write the name of respiratory pigment present in prawn.
- (g) What is the function of pedicellariae in asterias ?

2. Answer the following questions : (any four)

$$2 \times 4 = 8$$

- (a) Write on structure of axoneme.
- (b) Write short note on spongocoel.
- (c) Peripatus forms a connecting link between two phyla. Discuss the statement.
- (d) Give the functions of osphradium.
- (e) Define pre-erythrocytic schizogony of sporozoite in liver of infected animal.

3. Answer any three questions :

$$5 \times 3 = 15$$

- (a) Describe the internal structure of obelia.

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- (b) Write on the skeleton o significance.

- (c) Give the parasitic adaptat

- (d) Explain the ciliary moveme

- (e) Give an account of structur compound eyes.

4. (a) Write on mode of nutrition suitable examples.

Or

- (b) What are the different ty Describe their function.

- (c) Give at least five chara annelida and classify the cl to order with characters a

Or

- (d) Give main characters of phy classify the class Gastropoda suitable examples.

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- (e) Describe the life history and parasitic adaptation of fasciola. 8+2=10

Or

- (f) Write on water vascular system in Echinodermata and its significance. 8+2=10