Total No. of printed pages = 5

3 (Sem 1) ZOO M1

2015

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 : 1×7=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

(i) Lamarck

(ii) Huxley

(iii) John Ray

(iv) Linnaeus

(c) The species that are reproductively isolated but morphologically identical are refered as

(i) Cryptic species

(ii) Sibling species

(iii) Sympatric species

(iv) Allopatric species

(d) Which of the following is not an intraspecific catagory ?

(i) Race

(ii) Subspecies

(iii) Deme

(iv) Tribe

(e) One of the technique used in molecular taxonomy is

(i) Chromatography

(ii) Electrophoresis

(iii) DNA Bar Coding

(iv) Karyotyping

(f) Homologies are the features that have

(i) similar function

(ii) different structure

(iii) common ancestors

(iv) all of the above

(g) Aristotle is credited with

(i) father of taxonomy

(ii) father of biological classification

(iii) father of genetics

(iv) author of 'Origin of Species'

2. Distinguish between : 2×4=8

(a) Phenon and Taxon

(b) Alpha taxonomy and Beta taxonomy

(c) Monotypic species and Polytypic species

(d) Race and Cline

3. Write short notes on any *three* : 5×3=15

(a) Homonymy

(b) Linnaean hierarchy

(c) Evolutionary species concept

(d) Binomial nomenclature

(e) 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

5. What are the techniques employed in chemotaxonomy ? Write the limitations of biochemical approach in solving taxonomical problems. 7+3=10

Or

Write about the process of typification. Mention the necessity of type specimen in Zoology. 8+2=10

6. What is taxonomic key ? State its utility in taxonomic work. Write a note on Simple Bracket Key. 2+3+5=10

Or

Give an account of the methods of collection of invertebrates. State the importance of biological collections. 8+2=10

Total No. of printed pages = 4

3 (Sem 1) ZOO M2

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 : 1×7=7

(a) What is cyclosis ?

(b) Where mesonchyma 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*) 2×4=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 : 5×3=15

(a) Describe the internal structure of obelia.

(b) Write on the skeleton of sponge and its significance.

(c) Give the parasitic adaptation of tapeworm.

(d) Explain the ciliary movement of paramecium.

(e) Give an account of structure and function of compound eyes.

4. (a) Write on mode of nutrition in protozoa with suitable examples. 8+2=10

Or

(b) What are the different types of zooid ? Describe their function. 3+7=10

(c) Give at least five characters of phylum annelida and classify the class Hirudinea up to order with characters and examples. 2+8=10

Or

(d) Give main characters of phylum mollusca and classify the class Gastropoda up to order with suitable examples. 2+8=10

(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