

Roll No.

E-322

**M. Sc. (First Semester)
EXAMINATION, Dec.-Jan., 2020-21**

ZOOLOGY

Paper First

(Biosystematics, Taxonomy and Biodiversity)

Time : Three Hours]

[Maximum Marks : 80

[Minimum Pass Marks : 16

Note : Attempt all Sections as directed.

Section—A

1 each

(Objective/Multiple Choice Questions)

Note : Attempt all questions.

Choose the correct answer :

1. Which one of the following is not covered under taxonomy :

- (a) Alpha taxonomy
- (b) Beta taxonomy
- (c) Delta taxonomy
- (d) Gamma taxonomy

P. T. O.

2. Name the philosopher who first classified organism :
 - (a) Whittaker
 - (b) Carle woere
 - (c) Linnaeus
 - (d) Aristotle

3. The chief merit of Bentham and Hookers classification is that :
 - (a) It is a natural system of classification of all group of plant.
 - (b) A system based on evolutionary concept
 - (c) It also considered the phylogenetic aspect
 - (d) The discription of taxa based on actual examination of the specimen.

4. One of the based method for understanding general relationships of plant is :
 - (a) Cytotaxonomy
 - (b) Experimental taxonomy
 - (c) Numerical taxonomy
 - (d) Chemotaxonomy

5. Taxonomy deal with :
 - (a) Classical taxonomy
 - (b) Chemotaxonomy
 - (c) Phylogeny
 - (d) Experimental taxonomy

6. Which of the following is not a Darwinian classification :
- (a) Hutechinson
 - (b) Bentham and Hooker
 - (c) Engler and Pranti
 - (d) Iakhtajan
7. Arrange the correct order :
- 1. Class
 - 2. Kingdom
 - 3. Phylum
 - 4. Order
 - 5. Genus
 - 6. Family
 - 7. Species
- (a) 6, 2, 4, 1, 5, 7, 3
 - (b) 7, 1, 3, 4, 5, 6, 1
 - (c) 1, 2, 3, 4, 5, 6, 7
 - (d) 2, 3, 1, 4, 6, 5, 7
8. *Rattus rattus* is :
- (a) Tautonym
 - (b) Autonym
 - (c) Synonym
 - (d) Homonyme
9. Six kingdom classification was given by :
- (a) Ernst Hackel
 - (b) Gray and Doolittle
 - (c) Linnaeus
 - (d) Whittekar

10. Blue green algae or kept in to :
- (a) Animalia
 - (b) Plantae
 - (c) Monera
 - (d) Protista
11. Family tree is represented by :
- (a) Gladogram
 - (b) Key
 - (c) Herbarium
 - (d) Arbaratum
12. Name of organization which provides rules for naming animal.
- (a) ICZN
 - (b) ICBN
 - (c) ICN
 - (d) IBM
13. What is the term given to a duplicate specimen of original type ?
- (a) Lactotype
 - (b) Holotype
 - (c) Isotype
 - (d) Meotype

14. *Musca domestica* is the name of :
- (a) Insect
 - (b) Grasshopper
 - (c) House fly
 - (d) Honey bee
15. Reproductive barrier that occur before the sperm fertilize the egg is a :
- (a) Pre zygotic barrier
 - (b) Post zygotic barrier
 - (c) Allotropic
 - (d) Sympatric
16. Binomial Nomenclature consist of two word :
- (a) Genus and spices
 - (b) Genus and subspecies
 - (c) Genus and family
 - (d) Species and variety
17. has the maximum genetic diversity in India :
- (a) Potato
 - (b) Tea
 - (c) Mango
 - (d) Teak
18. Galapagos finches are a good example of :
- (a) Extinction
 - (b) Heterochromia
 - (c) Island gigantism
 - (d) Adaptive radiation

19. is the example of ex-situ conservation.
- (a) Sacred groves
 - (b) Wild life sanctuary
 - (c) Seed Bank
 - (d) National park
20. Global warming can significantly be controlled by :
- (a) Increasing solid waste
 - (b) Reducing water wastage
 - (c) Burning human generated waste
 - (d) Reducing fossil fuel consumption

Section—B

2 each

(Very Short Answer Type Questions)

Note : Attempt all questions using 2-3 sentences.

1. Father of taxonomy
2. Role of taxonomy in public health
3. Cosmopolitan species
4. Contemporaneous species
5. ICZN
6. Flotation method
7. In-situ condition
8. Define genetic diversity

Section—C

3 each

(Short Answer Type Questions)

Note : Attempt all questions precisely using approximately 75 words.

Write short notes on the following :

1. Molecular taxonomy
2. What is quarantine ?

3. Polytypic species
4. Apomictic species
5. Curating
6. Preparation of specimen
7. Hotspot
8. Threats to Biodiversity

Section—D

5 each

(Long Answer Type Questions)

Note : Attempt all questions precisely using 150 words.

1. Explain the cytotaxonomy.

Or

Write an essay on application of biosystematics.

2. Write an essay on speciation.

Or

Write notes on taxonomic characters.

3. Explain the process of typification.

Or

Explain any two types of key and their merits and demerits

4. Write notes on biodiversity.

Or

Explain Shannon wiener index.