

M.Sc. ZOOLOGY
FIRST SEMESTER (REPEAT)
TAXONOMY, BIOSYSTEMATICS & BIostatISTICS
MSZ-101
[USE OMR FOR OBJECTIVE PART]

SET
A

Duration: 3 hrs.

Full Marks: 70

(Objective)

Time: 30 mins.

Marks: 20

Choose the correct answer from the following:

1 × 20 = 20

- The type of sampling done to rule out biasness is called:
 - Random sampling
 - Non random sampling
 - Both of the above
 - None of the above
- Bird skins prepared by removing all bones, bills and legs is known as:
 - ROM
 - Shmoo
 - Flat skin
 - Catapult
- In which species concept, it was stated that "phenotypic similarity is all that matters in recognizing separate species"?
 - Nominalistic Species Concept
 - Typological Species Concept
 - Phenetic species concept
 - None of these
- In which species concept, it is said that "Species have no actual existence in nature"?
 - Nominalistic Species Concept
 - Typological Species Concept
 - Phenetic species concept
 - None of these
- A species of organism in which sexual reproduction does not occur, represented typically as a collection of clones is called:
 - Nothospecies
 - Compilospecies
 - Quasispecies
 - None of these
- In Chemotaxonomy, which of the following is not used as a tool for species identification?
 - Protein functions
 - Identification of amino acids
 - Prevalence of isoenzymes
 - None of these
- A species name in zoology when derived from the personal name of women ends with:
 - Orun
 - Ae
 - Arum
 - Ensis
- International code of zoological nomenclature was adapted in:
 - 1951
 - 1901
 - 1971
 - 1891
- The key in which the relationship of the divisions is most apparent to the eye is:
 - Indented key
 - Simple bracket key
 - Simple non-bracket key
 - Both (a) and (b)

10. 0.05% significance means the result is 95%:
a. Accurate
b. Wrong
c. Varied
d. Doubtful
11. Who first ever forwarded the concept of polytypic species?
a. Beckner
b. Sneath
c. Aristotle
d. None of these
12. A diversity index is a:
a. Qualitative measure
b. Quantitative measure
c. Informative Measure
d. All of the above
13. The standard deviation of a random variable, statistical population, data set, or probability distribution is:
a. The average value of its sum
b. The square root of its variance
c. The half value of its variance
d. The square of its variance
14. The key most useful to non-specialist and field workers is:
a. Pictorial key
b. Branching type key
c. Box type key
d. All of these
15. Chi Square Test reveals:
a. Association
b. Goodness of Fit
c. Independence of attributes
d. Both b & c
16. Pitfall traps are employed to capture:
a. Invertebrates
b. Amphibia
c. Reptilia
d. All of these
17. Who first ever criticized the Nominalistic Species Concept?
a. Aristotle
b. Plato
c. Jordan
d. None of these
18. The number that appears the most times in a set of numbers is the:
a. Mean
b. Median
c. Mode
d. None of the above
19. The series of data where the values of the observations contain frequencies assigned to them is called:
a. Individual series
b. Discrete series
c. Discontinuous series
d. Continuous series
20. Sampling done by grouping the data first is called:
a. Random sampling
b. Cluster sampling
c. Systematic sampling
d. Non-random sampling

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(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. Define taxonomy. Distinguish between Taxonomy and Systematics. Also write a note on similarities between taxonomy and systematics. 1+5+4=10
2. What are type specimens? What are the needs and importance of type specimens? Discuss in brief the different zoological types recognized by the ICZN. 2+2+6=10
3. Discuss briefly the salient features of the International Code of Zoological Nomenclature. 5+5=10
4. What is correlation? Describe different types of correlation with diagram and examples. 10
5. Define species. Write the different species concept with their criticism. 2+8=10
6. What are taxonomic Keys? Explain how collected specimens are identified with the help of taxonomic keys and their various styles. 2+8=10
7. What is standard deviation? The following table gives the frequency distribution of the daily commuting time (in minutes) from home to work for all 25 employees of a company. Calculate the mean, variance, and standard deviation of the daily commuting times. 10

Daily commuting time (mins)	Number of employees
0-10	4
10-20	9
20-30	6
30-40	4
40-50	2

8. Calculate the Shannon Weiner Index for the data 10

SPECIES	NO OF INDIVIDUALS
HONEYBEE	22
HOUSEFLY	9
MOSQUITO	2
DRAGON FLY	19
ANTS	12

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