Exercise-1

✎ Marked Questions are for Revision Questions.

ONLY ONE OPTION CORRECT TYPE

SECTION - A # WHAT IS LIVING

1. Which one of the following sets of characters TRULY defines a living organism?

(1) Growth and metamorphosis

(2) Metabolism and regeneration

(3) Self replication and response to external stimulus

(4) Consciousness and metabolic reactions

2. Among the following which can be a common feature exhibited by both living and non-living?

(1) Growth   (2) Reproduction   (3) Metabolism   (4) Cellular organisation

3. Among the following, increase in body mass can be taken as criterion for growth

(1) In living organisms   (2) In non-living objects

(3) Both 1 and 2   (4) None of the above

4. Select the incorrect statement about living processes.

(1) All living phenomena is due to underlying interaction.

(2) Properties of tissues are not present in the constituent cells.

(3) Properties of cellular organelles are present in the molecular constituents of the organelles.

(4) The interactions results in emergent properties at a higher level of organisation.

5. In living organisms growth is from

(1) Outside   (2) Inside

(3) Both from outside and inside   (4) None of the above

6. Photoperiod affects reproduction in seasonal breeders in

(1) Plant   (2) Animal   (3) Both   (4) None of the above

7. Reproduction is not considered as defining property of living organisms because -

(1) Some organisms reproduce by asexual mode

(2) Some organisms do not reproduce

(3) Non-living objects can also reproduce

(4) Both (1) and (2)

8. Growth and reproduction are mutually exclusive events for

(1) Bacteria   (2) Microorganisms

(3) Amoeba   (4) Higher organisms

SECTION - B # BIODIVERSITY AND TAXONOMY

1. The term "Taxonomy" was introduced by

(1) de Candolle   (2) Bentham and Hooker

(3) Linnaeus   (4) Huxley

2. Most recent branch of taxonomy is
   (1) Karyotaxonomy (based on nucleus and number, structure and arrangement of chromosomes)
   (2) Biochemical taxonomy (based on biochemicals)
   (3) Numerical taxonomy (based on number of shared characters using statistical methods)
   (4) Classical systematics (based on morphological features)

3. The framework system of classification in which various taxonomic categories are arranged in order of logical sequence is called
   (1) systematics   (2) classification   (3) hierarchy   (4) taxon

4. Scientific study of diversity of organisms and their evolutionary relationships is
   (1) Morphology   (2) Anatomy   (3) Taxonomy   (4) Systematics

5. Phenetics is
   (1) Natural Classification   (2) Numerical Taxonomy
   (3) Cytotaxonomy   (4) Chemotaxonomy

6. Which of the following is included in New systematics.
   (1) Karyotaxonomy and Cytotaxonomy
   (2) Morphotaxonomy and Numerical taxonomy
   (3) Experimental taxonomy and Chemotaxonomy
   (4) All of the above.

7. Which is/are wrong–

(A)	Phylogenetic classification system	:	based on evolutionary relationship between the various organism
(B)	Numerical Taxonomy	:	Use of computers
(C)	Cytotaxonomy	:	Based on cytological information like chromosome number, structure.
(D)	Chemotaxonomy	:	Based on study of experimental determination of the genetic interrelationship.

   (1) only A   (2) only B   (3) only C   (4) only D

8. Dendrogram is based on
   (1) phenetic taxonomy   (2) adansonian taxonomy
   (3) numerical taxonomy   (4) all the above

9. Dynamic concept of species is that species gradually change (mutate) and form new species was first given by a French biologist
   (1) John Ray   (2) Julian Huxley   (3) de Vries   (4) Lamarck

10. 'Static concept of species' that states that 'nullae species novae' i.e., was given by
   (1) Lamarck   (2) Linnaeus   (3) de Candolle   (4) Mayr

11. The immense biological diversity is the result of?
   (1) Organic evolution   (2) Adaptations
   (3) Inorganic evolution   (4) Variations

SECTION - C # NOMENCLATURE

1. A binomial nomenclature includes

    (1) two taxa   (2) one name   (3) two terms   (4) None of these

2. In binomial nomenclature proposed by Linnaeus, every organism has

    (1) Two names, one Latin and other common

    (2) Two names, one scientific and other vernacular

    (3) One scientific name given by two scientists

    (4) One scientific or biological name with two words - a genus and a species

3. Binomial epithet in binomial nomenclature is

    (1) Genus + Species   (2) Genus

    (3) Genus + Species + Author name   (4) Genus + Species + Family

4. ICBN stands for

    (1) International Classification of Biological Nomenclature

    (2) International Code of biological Nomenclature

    (3) International Code of botanical Nomenclature

    (4) International Classification of Biological Naming

5. In a scientific name, every name has two words – Genus and Species.

    (1) First alphabet of genus is written in capital letter

    (2) First alphabet of species is written in small letter

    (3) Every name is followed by author citation

    (4) All of the above

6. The idea of Binomial Nomenclature was first introduced by

    (1) Gaspard Bauhin   (2) Linnaeus   (3) John Ray   (4) Caesalpino

7. In which book, binomial nomanclature was issued by Linnaeus

    (1) Historia Naturalae   (2) Systema Naturae

    (3) Historia Plantarum   (4) Genera Plantarum

SECTION - D # TAXONOMICAL CATEGORIES

1. Taxon refers to

    (1) A short term for taxonomy

    (2) A group of species

    (3) A taxonomic unit of any rank

    (4) A compendium of international rules of nomenclature

2. Category is

    (1) a rank in hierarchy   (2) any group of living objects

    (3) a term used interchangeably with taxon   (4) a taxonomic group

3. Mark the odd one out.

    (1) Family   (2) Order   (3) Taxon   (4) Species

4. Which taxonomic category contains organisms belonging to same class but not to same family?

    (1) Species   (2) Genus   (3) Order   (4) Population

5. Genus is a group of related

    (1) Species   (2) Varieties   (3) Orders   (4) Families

6. The most inclusive category amongst the following categories is

    (1) Order   (2) Family   (3) Phylum   (4) Species

7. Species name is not used alone because

    (1) It is not a complete name

    (2) It does not sound well

    (3) Same species name may be used with many genera

    (4) All of the above

8. Which of the following is not a category?

    (1) Aves   (2) Class   (3) Phylum   (4) Genus

9. Which of the following is/are a category?

    (1) Order   (2) Class   (3) Genus   (4) All of these

10. Terms species, division and phylum were coined by

    (1) Species by John Ray, Division by Eichler and Phylum by Cuvier

    (2) Species by Cuvier, Division by Eichler and Phylum by John Ray

    (3) Species by John Ray and Phylum and Division by Haeckel

    (4) Species and Division by John Ray and Phylum by Linnaeus

11. Intermediate category is a

    (1) category in addition to obligate categories   (2) subphylum

    (3) subspecies   (4) all of the above

12. A genus with a single species is called

    (1) Typical   (2) Monotype   (3) Polytype   (4) Syntype

13. A population of similar organisms which are capable of interbreeding to form fertile offspring is

    (1) species   (2) genus   (3) tribe   (4) family

14. Which is not a taxon in Linnaeus hierarchy?

    (1) Class & order   (2) Kingdom & Class   (3) Genus & species   (4) Phylum & Variety

15. The category 'tribe' is added in between

    (1) genus and species   (2) family and genus

    (3) subfamily and genus   (4) class and order

16. All plants and animals belonging to various phyla are assigned to the highest category called

    (1) Kingdom   (2) Phylum   (3) Class   (4) Division

17. In case of plants classes with a few similar characters are assinged to a higher category called

    (1) Kingdom plantae   (2) Division   (3) Phylum   (4) None of these

18. The term 'species' was coined by
(1) Aristotle   (2) Engler   (3) John Ray   (4) Linnaeus

19. Category among following is
(1) Species   (2) Malvaceae   (3) Thalamiflorae   (4) Dicotyledonae

20. Identify from the following the only taxonomic category that has a real existence
(1) Genus   (2) Species   (3) Phylum   (4) Kingdom

21. Which of the following taxonomic ranks contain organisms most similar to one another?
(1) Class   (2) Genus   (3) Family   (4) Species

22. The biological definition of a species depends on
(1) the geographical distribution of two groups of organisms
(2) reproductive isolation of two groups of organisms
(3) anatomical and developmental differences between the two groups of organisms
(4) difference in the adaptation of two groups of organisms

23. Choose the correct sequence in the hierarchy of taxonomic categories in descending order.
(1) Species – genus – family – order – class – division
(2) Division – order – class – family – genus – species
(3) Division – class– family – order – genus – species
(4) Division – class – order – family – genus – species

24. Which one is the correct hierarchical order in Taxonomy?
(1) Genus < species < class < order   (2) Genus < class < order < family
(3) Species < order < class < phylum   (4) Genus < class < division < order

25. Taxonomic hierarchy refers to
(1) stepwise arrangement of all categories for classification of plants and animals
(2) a group of senior taxonomists, whow decide the nomenclature of plants and animals
(3) a list of botanists or zoologists, who have worked on taxonomy of a species or group
(4) classification of a species based on fossil record

26. Select the wrong statements
I. Lower the taxon, more are the characteristics that the members within the taxon share
II. Order is the assemblage of genera which exhibit a few similar characters.
III. Cat and dog are included in the same family – Felidae.
IV. Binomial nomenclature was introduced by Carolus Linnaeus
(1) I, II and III   (2) II, III and IV   (3) I and IV   (4) II and III

27. The number of obligate categories which are always used in a taxonomic hierarchy are
(1) 7   (2) 5   (3) 3   (4) 8

SECTION - E # BIOLOGICAL CLASSIFICATION

1. Classification based on maximum morphological characters and form relationships (similarities and dissimilarities) is called

   (1) Phylogenetic   (2) Natural   (3) Artificial   (4) Ancient

2. Artificial system is based on

   (1) One or two morphological characters   (2) Few characters

   (3) Several characters   (4) Synthetic characters

3. Natural system of classification differs from artificial system in

   (1) Developing evolutionary trends   (2) Taking only vegetative traits

   (3) Employing only floral traits   (4) Bringing out similarities & dissimilarities

4. Thallophyta includes

   (1) Algae, Fungi, Bacteria and Lichens   (2) Algae and Fungi

   (3) Fungi and Bacteria   (4) Algae, Fungi and Lichens

5. Three phases of taxonomy $\alpha. \beta. \gamma$ were recognised by

   (1) De candolle   (2) Julian Huxley   (3) Takhatajan   (4) Turril

6. Phylogeny refers to

   (1) taxonomy of organisms   (2) evolutionary classification

   (3) evolutionary history   (4) modern classification

7. Linnaeus sexual system of classification of plants on the basis of number and arrangement of stamens and carpels / morphology of floral parts is

   (1) artificial   (2) natural

   (3) phylogenetic   (4) partly natural and partly artificial

8. Five kingdom classification includes

   (1) Monera, Protista, Animalia, Plantae, Algae

   (2) Monera, Protista, Fungi, Plantae, Animalia

   (3) Virus, Prokaryota, Fungi, Plantae, Animalia

   (4) Algae, Fungi, Bryophyta, Pteridophyta, Gymnosperms

9. The number of species classified in 'Species Plantarum' is

   (1) 5000   (2) 6000   (3) 4000   (4) 3800

10. Natural system of classfication was given by

    (1) George Bentham and Joseph Dalton Hooker

    (2) Hutchinson

    (3) Carolus Linnaeus

    (4) Ernst Haeckel

11. First phylogenetic system of classification was proposed by

    (1) Hutchinson   (2) Engler and Prantl   (3) Takhtajan   (4) Linnaeus

12. 'Systema Naturae' was written by

    (1) Ernst Mayr   (2) Carolus Linnaeus   (3) R H Whittaker   (4) W M Stannley

13. Decomposers belong to kingdom
   (1) Monera and Protista   (2) Protista and Fungi (Mycota)
   (3) Monera, Protista and Fungi   (4) Protista, Fungi and Animalia

14. Three kingdom system of classification was proposed by
   (1) Haeckel   (2) Linnaeus   (3) Stanier   (4) Copeland

15. Four kingdom system of classification was given by
   (1) Haeckel   (2) Linnaeus   (3) Copeland   (4) Whittaker

16. In Whittaker's five kingdom system of classification, eukaryotes are placed in
   (1) three kingdoms   (2) two kingdoms   (3) four kingdoms   (4) all the five kingdoms

17. Copeland and Stanier (1956) in their four kingdom system. Placed prokaryotes in kingdom
   (1) Monera   (2) Protista   (3) Metaphyta   (4) Metazoa

18. Six kingdom classification was suggested by Gray and Doolittle (1982) and Carl Woose (1990) divided these six kingdoms into three domains on the basis of sequence of
   (1) r-RNA genes   (2) m-RNA genes
   (3) Nitrogen bases in DNA   (4) Amino acids in protein

19. In Whittaker's classification, which kingdom is main producer?
   (1) Monera   (2) Protista   (3) Plantae   (4) Mycota

20. The book Genera plantarum was written by
   (1) Bessey   (2) Engler and Prantl
   (3) Bentham and Hooker   (4) Hutchinson

21. The practical purpose of classification of living organisms is to
   (1) Facilitate identification of unknown organisms
   (2) Explain the origin of living organisms
   (3) Trace the evolution of living organisms
   (4) Name the living organisms

SECTION - F # TAXONOMICAL AIDS

1. The Royal Botanical Garden is situated in
   (1) Los Angeles   (2) Kolkata   (3) Kew England   (4) California

2. The places where collection of dried, pressed plant specimens mounted on paper, are kept systematically
   (1) Herbaria   (2) Museums   (3) Botanical gardens   (4) Zoological parks

3. National herbarium contains plants of
   (1) a region   (2) a country   (3) a locality   (4) world

4. The headquarter of BSI (Botanical Survey of India) is at
   (1) Howrah, (Calcutta)   (2) New Delhi
   (3) NBRI Lucknow (U.P)   (4) FRI Dehradun (Utranchal)

5. What is a botanical garden?

(1) It is essentially a collection of living plants maintained for both pure and applied studies

(2) It is essentially a collection of plants only

(3) It is essentially the collection of rare and fossil plants

(4) It is for research work

6. Herbarium means

(1) Store house where preserved identified dried specimens are kept systematically

(2) A heavy card sheet carrying the dried and pressed specimen of plant

(3) A garden with all plants arranged systematically

(4) A system of arranging plants into different categories

7. Largest herbarium of Asia is located at

(1) Kew   (2) Sibpur   (3) Chennai   (4) Trombay

8. Which one of the following is not includes in taxonomical aids?

(1) Herbarium   (2) Museum   (3) Botanical gardens   (4) None of these

9. Identification of plants and animals based on the

(1) similarities   (2) dissimilarities   (3) (1) and (2) both   (4) None of these

10. The keys are based on the contrasting characters generally in a pair called -

(1) couplet   (2) lead   (3) specimens   (4) data

11. National Botanical Research Institute is situated at

(1) Lucknow   (2) Kolkata   (3) Mumbai   (4) Chennai

12. First national park developed in India is

(1) Jim Corbett   (2) Gir   (3) Kaziranga   (4) None of these

13. Which one of the taxonomic aids can give comprehensive account of complete compiled information of any one genus or family at a particular time?

(1) Taxonomic key   (2) Flora   (3) Herbarium   (4) Monograph

14. A germplasm collection is a

(1) collection of specimens of all the species of an area in a herbarium or botanical garden

(2) collection of modern varieties of a crop

(3) collection of plants or seeds having diverse alleles of all genes in a crop

(4) collection of seeds or pollen of rare and threatened species of a group or area

SECTION - G # ADDITIONAL INFORMATION

1. Scala naturae "ladder of nature" was first theory in biology, in which all things were placed in a hierarchy. It was given by

(1) Haeckel   (2) Aristotle   (3) Leeuwenhoek   (4) Cuvier

2. Branch of zoology dealing with the study of fishes is known as

(1) Herpetology   (2) Ichthyology   (3) Mammology   (4) Ornithology

3. Which is not based on predictive generalisation or repeatable experimentation?

(1) Hypothesis   (2) Theory   (3) Principle   (4) Law

4. Father of botany is

(1) Aristotle   (2) Robert Hooke   (3) Darwin   (4) Theophrastus

5. Who was awarded with Triple Crown of biology (International prize for biology, Balzen prize, Crafoord prize)?

(1) Linnaeus   (2) Darwin   (3) Ernst Mayr   (4) Aristotle

6. Father of ancient plant taxonomy is

(1) Aristotle   (2) Robert Hooke   (3) Darwin   (4) Theophrastus

Exercise-2

1. Of the following taxonomic categories which is the most inclusive (i.e., is the highest in the hierarchy)?

(1) Order   (2) Sub-species   (3) Class   (4) Genus

2. Two different animals are classified into the same family. This means they would be classified in

(1) The same phylum, but different class

(2) The same class, but different species

(3) A different kingdom and a different phylum

(4) A different class and a different order

3. Which of the following taxonomic categories contains organisms least similar to one another?

(1) Class   (2) Family   (3) Genus   (4) Species

4. Organisms grouped under kingdom Protista can be described as

(1) Chemosynthetic prokaryotes   (2) Unicellular eukaryotes

(3) Multicellular heterotrophs   (4) Unicellular autotrophs

5. Which of the following cannot be the criteria for grouping of plants / animals together?

(1) Similar reproductive physiology   (2) Similar behavioral/mating pattern

(3) Anatomical similarity   (4) Genetic similarity

Exercise-3

PART - I : NEET/AIPMT QUESTION (PREVIOUS YEARS)

1. The diversity in living beings is due to   **(AIPMT-2001)**

(1) Mutations   (2) Long term evolutionary changes

(3) Short term evolutionary changes   (4) Gradual changes

2. Biosystematics aims at   **(AIPMT-2003)**

(1) the classification of organisms based on their evolutionary history and establishing their phylogeny on the totality of various parameters from all fields of studies

(2) identification and arrangement of organism on the basis of their cytological characteristics

(3) the classification of organism based on broad morphological characters

(4) delimiting various taxa of organisms and establishing their relationships

3. Species are considered as   **(AIPMT-2003)**

(1) artificial concept of human mind which cannot be defined in absolute terms

(2) real units of classificatiion devised by taxonomists

(3) real basic units of classification

(4) the lowest units of classification

4. Phenetic classsifcation of organisms is based on   **(AIPMT-2004)**

(1) observable characteristics of existing organisms

(2) the ancestarl lineage of existing organisms

(3) dendrogram based on DNA characteristics

(4) sexual characteristics

5. One of the most important functions of botanical gardens is that   **(AIPMT-2004)**

(1) one can observe tropical plants there   (2) they allow *ex situ* conservation of germplasm

(3) they provide the natural habitat for wildlife   (4) they provide a beautiful area for recreation

6. Botanical gardens provide   **(AIPMT-2005)**

(1) Beautiful area for recreation   (2) Reservoir for tropical plants

(3) Ex situ conservation of germplasm   (4) Natural habitat for wildlife

7. The institute which encourages publication of local flora in India is   **(AIPMT-2006)**

(1) NBRI   (2) FRI   (3) BSI   (4) IARI

8. CNH (Central National Herbarium) is located at   **(AIPMT-2006)**

(1) Mumbai   (2) Chennai   (3) Kolkata   (4) Bangalore

9. Two plants can be conclusively said to belong to the same species if they   **(AIPMT-2007)**

(1) can reproduce freely with each other and from seeds

(2) have more than 90 percen similar genes

(3) look similar and possess identical secondary metabolites

(4) have same number of chromosomes

10. ICBN stands for   **(AIPMT-2007)**

(1) Indian Congress of Biological Name   (2) International Code for Botanical Nomenclature

(3) International Congress of Biological Name   (4) Indian Code of Botanical Nomenclature

11. Phylogenetic system of classification is based on   **(AIPMT-2009)**

(1) evolutionary relationships   (2) morphological features

(3) chemical constituents   (4) floral characters

12. Which one of the following is not a correct statement?   **(NEET-2013)**

(1) Botanical gardens have collection of living plants for reference

(2) A museum has collection of photographs of plants and animals

(3) Key is taxonomic aid for identification of specimens

(4) herbarium houses dried, pressed and preserved plant specimens

13. Which of the following represent maximum number of species among global biodiversity?

(AIPMT-2013)

(1) Algae   (2) Lichens   (3) Fungi   (4) Mosses and ferns

14. Five kingdom system of classification suggested by R.H. Whittaker is not based on: **(AIPMT-2014)**

(1) Presence or absence of a well defined nucleus

(2) Mode of reproduction

(3) Mode of nutrition.

(4) Complexity of body organisation

15. In which of the following both pairs have **correct** combination?   **(AIPMT-2015)**

(1) *in situ conservation :* Cryopreservation

   Ex situ conservation : Wildlife Sanctuary

(2) *in situ conservation :* Seed Bank

   Ex situ conservation : National Park

(3) *in situ conservation :* Tissue calture

   Ex situ conservation : Sacred groves

(4) *in situ conservation :* National Park

   Ex situ conservation : Botanical Garden

16. Pick up the wrong statement: **(Re-AIPMT-2015)**

(1) Protista have photosynthetic and heterotrophic modes of nutrition

(2) Some fungi are edible

(3) Nuclear membrane is present in Monera

(4) Cell wall is absent in Animalia

17. Nomenclature is governed by certain universal rules. Which one of the following is contrary to the rules of nomenclature?   **(NEET-1-2016)**

(1) When written by hand, the names are to be underlined

(2) Biological names can be written in any language

(3) The first word in a biological name represents the genus name, and the second is a specific epithet

(4) The names are written in Latin and are italicised

18. Match the items given in Column I with those in Column II and select the **correct** option given below :   **(NEET-2018)**

Column I	Column II
a. Herbarium	i. It is a place having a collection of preserved plants and animals.
b. Key	ii. A list that enumerates methodically all the species found in an area with brief description aiding identification.
c. Museum	iii. Is a place where dried and pressed plant specimens mounted on sheets are kept.
d. Catalogue	iv. A booklet containing a list of characters and their alternates which are helpful in identification of various taxa

	a	b	c	d
(1)	i	iv	iii	ii
(2)	iii	iv	i	ii
(3)	ii	iv	iii	i
(4)	iii	ii	i	iv

19. Select the correctly written scientific name Mango which was first described by Carolus Linnaeus :

(NEET-1-2019)

(1) Mangifera Indica   (2) Mangifera indica Car. Linn.

(3) Mangifera indica Linn.   (4) Mangifera indica

20. The contrasting characteristics generally in a pair used for identification of animals in Taxonomic Key are referred to as :   **(NEET-2-2019)**

(1) Lead   (2) Couplet   (3) Doublet   (4) Alternate

PART - II : AIIMS QUESTION (PREVIOUS YEARS)

1. "Ordines Anomali" of Bentham and Hooker includes   **(AIIMS-2006)**

(1) plants described only in fossil state

(2) seed plants showing abnormal forms of growth and development

(3) plants described in the literature but which Bentham and Hooker did not see in original

(4) a few orders which could not be placed satisfactorily in the classification

2. Scientific name of Mango plant is *Mangifera indica* (Linn.) Santapau. In the above name Santapau refers to   **(AIIMS-2012)**

(1) Variety of Mango

(2) A taxonomist who proposed the present nomenclature in honour of Linnaeus

(3) A scientist who for the first time described Mango plant

(4) A scientist who changed the name proposed by Linnaeus and proposed present name

3. Basis of life are   **(AIIMS-2010, 2013)**

(1) nucleic acids   (2) proteins   (3) nucleoproteins   (4) amino acids

4. Which of the following is less general in characters as compared to genus?   **(AIIMS-2013)**

(1) Species   (2) Division   (3) Class   (4) Family

5. Read the following statements   **(AIIMS-2014)**

(i) Lower the taxon, more are the characteristics that the members within the taxon share.

(ii) Order is the assemblage of genera which exhibit a few similar characters.

(iii) Cat and dog are included in the same family Felidae.

(iv) Binomial Nomenclature was introduced by Carolus Linnaeus.

Which of the following statements are NOT correct.

(1) (i), (ii) and (iii)   (2) (ii), (iii) and (iv)

(3) (i) and (iv)   (4) (ii) and (iii)

6. Choose the correct one   **(AIIMS-2015)**

(a) Growth cannot be taken as a defining property of living organism.

(b) Dead organism does not grow.

(c) Reproduction can not be an all inclusive defining characteristic ofliving organisms.

(d) No nonliving object is capable of replicating itself.

(e) Metabolism in a test tube is nonliving.

(f) Metabolism is a defining feature of all living organisms.

(1) (a) and (c)   (2) All except (e)   (3) All except (c)   (4) All of these

Answers

EXERCISE - 1

SECTION - A

1.	(4)	**2.**	(1)	**3.**	(3)	**4.**	(3)	**5.**	(2)	**6.**	(3)	**7.**	(4)
8.	(4)												

SECTION - B

1.	(1)	**2.**	(1)	**3.**	(1)	**4.**	(4)	**5.**	(2)	**6.**	(4)	**7.**	(4)
8.	(4)	**9.**	(4)	**10.**	(2)	**11.**	(1)						

SECTION - C

1.	(1)	**2.**	(4)	**3.**	(3)	**4.**	(3)	**5.**	(4)	**6.**	(1)	**7.**	(2)

SECTION - D

1.	(3)	**2.**	(1)	**3.**	(3)	**4.**	(3)	**5.**	(1)	**6.**	(3)	**7.**	(3)
8.	(1)	**9.**	(4)	**10.**	(1)	**11.**	(4)	**12.**	(2)	**13.**	(1)	**14.**	(4)
15.	(3)	**16.**	(1)	**17.**	(2)	**18.**	(3)	**19.**	(1)	**20.**	(2)	**21.**	(4)
22.	(2)	**23.**	(4)	**24.**	(3)	**25.**	(1)	**26.**	(4)	**27.**	(1)		

SECTION - E

1.	(2)	**2.**	(1)	**3.**	(4)	**4.**	(1)	**5.**	(4)	**6.**	(3)	**7.**	(1)
8.	(2)	**9.**	(2)	**10.**	(1)	**11.**	(2)	**12.**	(2)	**13.**	(3)	**14.**	(1)
15.	(3)	**16.**	(3)	**17.**	(1)	**18.**	(1)	**19.**	(2)	**20.**	(3)	**21.**	(1)

SECTION - F

1.	(3)	**2.**	(1)	**3.**	(4)	**4.**	(1)	**5.**	(1)	**6.**	(1)	**7.**	(2)
8.	(4)	**9.**	(3)	**10.**	(1)	**11.**	(1)	**12.**	(1)	**13.**	(4)	**14.**	(3)

SECTION - G

1.	(2)	**2.**	(2)	**3.**	(1)	**4.**	(4)	**5.**	(3)	**6.**	(4)

EXERCISE - 2

1.	(3)	**2.**	(2)	**3.**	(1)	**4.**	(2)	**5.**	(3)

EXERCISE - 3

PART- I

1.	(2)	**2.**	(1)	**3.**	(3)	**4.**	(1)	**5.**	(2)	**6.**	(3)	**7.**	(3)
8.	(3)	**9.**	(1)	**10.**	(2)	**11.**	(1)	**12.**	(2)	**13.**	(3)	**14.**	(1)
15.	(4)	**16.**	(3)	**17.**	(2)	**18.**	(2)						
19.	(3)	**20.**	(2)										

PART- II

1.	(4)	**2.**	(4)	**3.**	(1)	**4.**	(4)	**5.**	(4)	**6.**	(2)

Self Practice Paper (SPP)

1. Living specimens are found in
    a. Herbarium
    b. Botanical garden
    c. Museums
    d. Zoological Parks
    (1) a and b   (2) b and c   (3) a and c   (4) b and d

2.# Given below is a taxonomic aid. Identify it

    (1) Keys   (2) Zoological Parks   (3) Herbarium   (4) Museum

3. Keys are
    (1) Based on the contrasting characters generally in a pair called couplet.
    (2) Generally analytical in nature
    (3) Separate key is required for each taxonomic category
    (4) More than one option is correct

4. Mark the statements as true (T) or False (F) w.r.t museums
    A. Plant specimens can only be preserved as dry specimens
    B. Larger animals like birds and mammals are usually stuffed and preserved
    C. Insects are preserved in insect boxes after collecting, killing and pinning
    (1) A (T); B (F); C (F)   (2) A (F); B (T); C (T)
    (3) A (T); B (T); C (T)   (4) A (F); B (F); C (T)

5. _____Contains information on any one taxon
    (1) Manuals   (2) Flora   (3) Monographs   (4) Catalogues

6. Most obvisous and technically complicated, defining property of all living organism is
    (1) Consciousness   (2) Growth   (3) Metabolism   (4) Reproduction

7. Identify the **correct** statement w.r.t. growth
    A. Increase in mass and increase in number of individuals are twin characters of growth.
    B. In plants growth is seen upto a certain age.
    C. In higher animals and plants, growth and reproduction are mutually inclusive events.
    D. In living organisms growth is from inside.
    (1) A & B only   (2) B, C & D only   (3) A, C & D only   (4) A & D only

8. ICBN stands for
    (1) International code for biological nomenclature
    (2) International code for bionomial nomenclature
    (3) International code for botanical nomenclature
    (4) International code for bacterial nomenclature

9. The scientific name of mango is
    (1) *Mangifera Indica Linn*   (2) *Mangifear indica Linn*
    (3) Mangifera inducus Linn   (4) Mangifera indica Linn

10. Classification is/has
    (1) A single step process
    (2) Subspecies or variety is the lowest obligate category
    (3) Category which does not represent rank
    (4) Taxonomic groups or categories are distinct biological entities and not merely morphological aggregates

11. Fill in the blaks with correct options

Common Name	Genus	Family	Class	Phylum / division
Man	_____A_____	Hominidae	_____B_____	Chordata
Wheat	*Triticum*	_____C_____	Monocotyledonae	_____D_____

    (1) A → Musca   C → Poacease
    (2) B → Diptera   D → Sapindales
    (3) A → *Homo*   D → Angiospermae
    (4) B → Mammalia   C → Anacardiaceae

12. Number of common characters are highest in the category
    (1) Order   (2) Genus   (3) Family   (4) Kingdom

13. Which of the following represents hierachial arrangement of taxonomic categories in ascending order?
    (1) Genus → order → family → species→ class → phylum
    (2) Species → genus → order → family→ class → phylum → kingdom
    (3) Species → family → genus → class→ order→ division→ kingdom
    (4) Species → genus → family → order→ class→ phylum→ kingdom

14. Which of the following represent taxa at same level?
    (1) *Panthera, Solanum, Felis*   (2) *Datura, Felidae, Polymoniales*
    (3) Solanaceae, Carnivora, Chordata   (4) Chordata, Dicotyledonae, Lamiales

15. # Given below is a taxonomic aid, identify a **correct** statement w.r.t. it

(1) These are the places where wild and domestic animals are kept

(2) The animals are kept in protected environments without human care

(3) It enables us to learn their food habits and behaviour

(4) All animals are provided different conditions as compared to their natural habitat

16. _____contains the actual account of habitat and distribution of plants

(1) Manuals   (2) Monographs   (3) Catalogues   (4) Flora

17. Herbarium sheets are

(1) Arranged according to a universally accepted system of classification

(2) Collection of plant and animal specimens preserved as dry specimens

(3) Store house or repository for future use

(4) More than one option is correct

18. The taxonomical aid key, used for identification of plants and animals is

(1) Based on dissimilarities only

(2) Based on contrasting characters generally in a pair called couplet

(3) Never analytical in nature

(4) Use of single taxonomic key for different categories

19. The special techniques for collection and preservation of specimens are required in

(1) Herbaria and zoological park   (2) Herbaria and museums

(3) Botanical gardens and herbaria   (4) Botanical gardens and zoological parks

20. Read the following statements

a. A multicellular organism grows by cell division.

b. Living organisms are self replicating, evolving and self regulating interactive system.

(1) Both (a) & (b) are incorrect   (2) Only (a) is correct

(3) Both (a) & (b) are correct   (4) Only (b) is correct

21. Growth and reproduction are mutually inclusive events for

(1) Algae and higher plants   (2) Higher plants and animals

(3) Liverworts, dicots and ferns   (4) Bacteria and *Amoeba*

22. Carolus Linnaeus is credited for giving the

(1) Taxonomic hierarchy for the first time with five categories

(2) Classification of organisms into two kingdoms

(3) Classifications of organisms on the basis of cell wall

(4) More than one option is correct

23. Find odd one taxon w.r.t. taxonomic categories
(1) Mammals   (2) Insects   (3) Mosses   (4) Angiosperms

24. Select **incorrect** statement w.r.t. binomial nomenclature
(1) Biological names are generally in Latin
(2) Biological names are written in italics
(3) Species name always starts with a capital letter
(4) Binomial epithet has two Latin words and one Roman word

25. Families are characterised on the basis of
(1) Aggregates of characters   (2) Reproductive characters
(3) Floral characters   (4) More than one option is correct

26. What is **true** for dog and cat?
(1) Different species belonging to same genus
(2) Different taxa belonging to same family
(3) Taxa of different families but of same order
(4) Taxa of different families and orders

27. Taxa mango and wheat represent which of the following common categories in taxonomic, hierarchy?
(1) Class and division   (2) Genus and kingdom
(3) Division and kingdom   (4) Order and family

28. Read the following statements
a. To facilitate more sound and scientific placement of various taxa, taxonomists have also developed subcategories.
b. Only few protozoans are heterotrophs and live as predators or parasites.
(1) Both (a) & (b) are correct   (2) Only (a) is incorrect
(3) Only (b) is incorrect   (4) Both (a) & (b) are incorrect

29. Primata as one of the taxonomic categories of man is equivalent to which category of wheat?
(1) Poaceae   (2) Poales   (3) Monocotyledonae   (4) Angiospermae

30. Which of the following taxonomical aids is **not** concerned with *ex-situ* conservation of organisms?
(1) Botanical gardens   (2) Zoological parks   (3) NBRI   (4) Museum

31. Select correct match

Column I		Column II	
a.	Herbarium	i.	Collections of living plants for reference
b.	Botanical garden	ii.	Couplet
c.	Key	iii.	As quick referral system
d.	Museum	iv.	Preserved plant and animal specimens

(1) a → iii, b → i, c → ii, d → iv   (2) a → iii, b → i, c → iv, d → ii
(3) a → i, b → iii, c → ii, d → iv   (4) a → iii, b → ii, c → i, d → iv

32. Find odd one pair of taxons w.r.t. the aggregates of closely related species

(1) Potato and brinjal   (2) Leopard and tiger   (3) Dog and lion   (4) Mustard and turnip

33. Keys are

(1) Generally analytical in nature

(2) Same for all taxonmic categories

(3) Based on contrasting characters in pair called lead

(4) Non-analytical in nature

34. All modern classifications are now based on

(1) Evolutionary history   (2) Genetics   (3) Ecology   (4) All of the above

35. In the classification of plants, the term cladistics refers to the

(1) sexual classification   (2) artificial classification

(3) binomial classification   (4) phylogenetic classification

36. From the given features, how many are associated with taxonomic keys?

a. Each statement is lead

b. Used in a pair called couplet

c. Generally analytical

d. Plant identification only

e. Non-specific for each category

f. Use set of alternate characters

(1) Three   (2) Two   (3) Four   (4) Six

37. Which of the following pair contain recorded description of organisms without any kind of their specimens?

(1) Monograph, museum   (2) Flora, catalogue

(3) Herbarium, monograph   (4) Manual, herbarium

38. Store house of collected plant specimens, called herbarium, serve which of the following functions?

(1) Useful in identification   (2) Quick source of reference

(3) Provides information about local flora   (4) More than one option is correct

39. The number of common characters among organisms goes on _____from _____to _____.

(1) Decreasing, Angiospermae, Triticum   (2) Increasing, Monocotyledone, Plantae

(3) Decreasing, Poaceae, Plantae   (4) Increasing, Sapindales, Angiospermae

40. Mule, Tigon, Liger and Hinny are

(1) Species   (2) Subspecies   (3) Hybrids   (4) Categories

41. Process of categorising different organisms on the basis of similarities and different in their characters is

(1) Identification   (2) Nomenclature   (3) Classification   (4) Characterisation

42. Systematics

(1) Is wider field of science

(2) Term is derived from Latin word

(3) is study of principles of classification only

(4) Does not take into account evolutionary character

43. In a taxonomic hierarchy, categories/taxa are arranged in

(1) Descending order   (2) Ascending order   (3) Vertical order   (4) Either (1) or (2)

44. Non-living objects show

(1) Irreversible intrinsic growth

(2) Cellular organization

(3) Extrinsic growth

(4) Self regulation

45. Arrange the following in order of increasing size, beginning with the smallest

i. family

ii. kingdom

iii. phylum/division

iv. genus

v. order

vi. class

vii. species.

(1) vii → iv → i → v → vi → iii → ii

(2) i → ii → iii → iv → v → vi → vii

(3) v → iv → i → vi → ii → iii → vii

(4) vii → vi → i → ii → iii → iv → v

SPP Answers

1.	(4)	**2.**	(3)	**3.**	(4)	**4.**	(2)	**5.**	(3)	**6.**	(1)	**7.**	(4)
8.	(3)	**9.**	(1)	**10.**	(4)	**11.**	(3)	**12.**	(2)	**13.**	(4)	**14.**	(1)
15.	(3)	**16.**	(4)	**17.**	(1)	**18.**	(2)	**19.**	(2)	**20.**	(3)	**21.**	(4)
22.	(4)	**23.**	(3)	**24.**	(3)	**25.**	(2)	**26.**	(3)	**27.**	(3)	**28.**	(2)
29.	(2)	**30.**	(4)	**31.**	(1)	**32.**	(3)	**33.**	(1)	**34.**	(4)	**35.**	(4)
36.	(3)	**37.**	(2)	**38.**	(4)	**39.**	(3)	**40.**	(3)	**41.**	(3)	**42.**	(2)
43.	(4)	**44.**	(3)	**45.**	(1)								