Chapter 1

The Living World

SECTION - A

Objective Type Questions

1. Which of the following is not a result of cell division?

(1) Growth (2) Repair (3) Metabolism (4) Reproduction

Sol. Answer (3)

Growth, repair and reproduction are the result of cell division.

2. Mark the incorrect pair.

(1) Hydra – Budding
(2) Flatworm – Regeneration
(3) Amoeba – Fragmentation
(4) Yeast – Budding

Sol. Answer (3)

Amoeba divides by binary fission

3. Which of the following is incorrect for reproduction?

(1) Unicellular organisms reproduce by cell division

(2) Reproduction is a characteristic of all living organisms

(3) In unicellular organisms, reproduction and growth are linked together

(4) Non-living objects are incapable of reproducing

Sol. Answer (2)

Reproduction is absent in sterile organism like mule, hinny, sterile/infertile human couples, worker bees etc.

4. Mark the incorrect statement w.r.t. metabolism.

(1) Microbes exhibit the metabolism

(2) It is the property of all living forms

(3) The metabolic reactions can be demonstrated in-vitro

(4) It is not a defining feature of life forms

Answer (4)

Sol.

Metabolism is a defining feature.

5. Non-living objects exhibit/show

(1) Property of self-replication (2) Evolution

(3) Self-regulating interactive systems (4) Reversible growth

Sol. Answer (4)

Non-living objects do not show-

(a) Property of self replication

(b) Evolution

(c) Self-regulating interactive systems

6. Which statement is false about the growth shown by non-living objects?

(1) The growth occurs from outside

(2) The growth is reversible

(3) The growth is due to the accumulation of material on the surface

(4) The growth is intrinsic

Sol. Answer (4)

The growth shown by non-living objects is extrinsic.

7. Local names of various plants and animals

(1) Help in recognizing organisms worldwide (2) Are used universally

(3) Are specific and distinct names (4) Vary from place to place

Sol. Answer (4)

Local names of various plants and animals are non-universal.

8. Which of the following is incorrect w.r.t. Binomial nomenclature?

(1) Biological names are generally in Latin

(2) The first word in a biological name represents the genus

(3) Biological names are printed in italics

(4) The first word of the genus starts with a small letter

Sol. Answer (4)

In Binomial nomenclature, genus always starts with a capital letter.

9. What do A, B and C represent in the given scientific name respectively?

Mangifera	indica	Linn
C	B	A

(1) Generic name, specific name and author's name

(2) Specific name, generic name and author's name

Sol.

(3) Author's name, specific name and generic name

(4) Generic name, author's name and specific name

Answer (3)

In binomial nomenclature, Ist name is genus, 2nd is species epithet and 3rd is author's name (optional).

10. Which of the following is incorrect regarding scientific names?

(1) These are also known as common names

(2) These ensure that each organism has only one name

(3) These have two components – the generic name and specific epithet

(4) These are universally accepted names

Sol. Answer (1)

Scientific names are given by biologist based upon agreed rules and criteria.

11. According to binomial nomenclature, every living organism has

(1) Two scientific names with single component

(2) One scientific name with two components

(3) Two names, one Latin and other common

(4) One common name with three components

Sol. Answer (2)

Every living organism has one scientific name with two components.

12. Which of the following is incorrect w.r.t. Species?

(1) A group of individual organisms with fundamental similarities

(2) Two different species breed together to produce fertile offsprings

(3) Human beings belong to the species sapiens

(4) Panthera has many specific epithet as tigris, leo and pardus

Sol. Answer (2)

Two different species cannot breed together to produce fertile offsprings.

13. Taxonomy deals with

(1) Development of zoological parks

(2) Study of kinds and diversity of microorganisms only

(3) Evolutionary relationships between organisms

(4) Classification of diverse organisms in different taxa

Sol. Answer (4)

Taxonomy is classification of diverse organisms in different taxa.

14. Which of the following features are not shown by scientific names of various organism?

(1) They consists of two components

(2) They have Latin origin

(3) They always have “linn” abbreviation at the end of second component

(4) They are printed in italics

Answer (3)

In scientific names author's name is optional and written in abbreviated roman.

15. The correct sequence of taxonomic study of a newly discovered organism is

(1) First classification then identification, nomenclature and characterization

(2) First identification then classifying organism and then characterizations and nomenclature

(3) First nomenclature then characterization, identification and classification

(4) First characterisation then identification and classification and then nomenclature

Sol. Answer (4)

Correct sequence of taxonomic study is

Characterisation Identification Nomenclature Classification

(First) (Last)

16. Which one of the following statements given below is not included in universal rules of nomenclature?

(1) Generic names and specific epithet should be in Latin words

(2) Generic name is immediately followed by name of taxonomists who described it firstly

(3) Generic name must begin with capital letter

(4) All letters of the specific name must be small

Sol. Answer (2)

Fact based

17. Find the correct sequence of taxonomic categories.

(1) Division Kingdom Genus Order

(2) Species Genus Family Order

(3) Class Order Family Division

(4) Kingdom Class Species Order

Sol. Answer (2)

Correct sequence of taxonomic categories.

Species Genus Family Order

18. Which of the following is a class?

Sol.

(1) Mammalia (2) Sapindales (3) Primate (4) Poales

Sol. Answer (1)

Mammalia – Class

Sapindales – Order

Primata – Order

Poales – Order

19. _____ is the assemblage of families which exhibit a few similar characters.

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

Sol. Answer (4)

Species Genus Family Order Class Division Kingdom

20. Fill in the blanks A and B.

Kingdom Phylum [A] Order [B]

(1) A - Genus; B - Species (2) A - Family; B - Class

(3) A - Class; B - Family (4) A - Species; B - Division

Sol. Answer (3)

Fact based

21. Match the following columns

Column-I		Column-II
a. Binomial nomenclature	(i)	Carolus Linnaeus
b. Generic name	(ii)	Muscidae
c. Family	(iii)	Panthera
d. Systema naturae		

(1) a(i), b(iii), c(iii), d(ii) (2) a(i), b(iii), c(ii), d(i) Sol. Answer (3) a(ii), b(i), c(i), d(iii) (4) a(iii), b(i), c(ii), d(i)

(2)

Binomial nomenclature	–	Carolus Linnaeus
Generic name	–	Panthera
Family	–	Muscidae
Systema naturae	–	Carolus Linnaeus

22. Genus is a category which comes in between the

(1) Family and Species (2) Class and Family (3) Order and Phylum (4) Kingdom and Class

Sol. Answer (1)

Species □ Genus □ Family

23. Three different genera Solanum, Petunia and Datura are placed in the family

(1) Poaceae (2) Anacardiaceae (3) Hominidae (4) Solanaceae

Sol. Answer (4)

Genera – Solanum, Petunia, Datura

□□□□□□□□□□□□□□□□□

Family – Solanaceae

24. Cat and dog are placed in which families respectively

(1) Felidae and Hominidae (2) Muscidae and Felidae

(3) Poaceae and Canidae (4) Felidae and Canidae

Sol. Answer (4)

Animal – Cat	Dog
□□□	□□□
Family – Felidae	Canidae

25. Which one of the following criteria is/are essential and form the basis of classical taxonomic studies?

(1) Ecological information of organisms (2) Development process

(3) External and internal structure (4) External structure

Sol. Answer (4)

Basis of modern taxonomic studies.

External and internal structure

Developmental process

Ecological information of organisms

26. In which of the following pair of category, greater is the difficulty of determining the relationship to other taxa at the same level, thus the problem of classification becomes more complex?

(1) Genus and species (2) Tribe and genus

(3) Division and phylum (4) Species and family

Sol. Answer (3)

Division and Phylum are at very next higher rank and they have lower number of similarity

27. In taxonomic hierarchy, which of the following group of taxa will have less number of similarities as compared to other?

(1) Solanaceae, Convolvulaceae and Poaceae (2) Polymoniales, Poales and Sapindales

(3) Solanum, Petunia and Atropa (4) Leopard, tiger and lion

Sol. Answer (2)

(1) Solanaceae, Convolvulacea, Poaceae – Family

(2) Polymoniales, Poales, Sapindales – Order

(3) Solunum, Petunia and Atropa – Genus

(4) Leopard , Tiger, Lion – Species

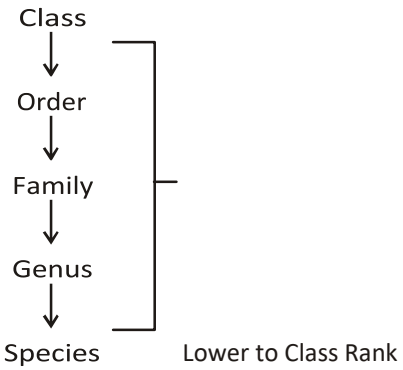
Less number of similarity will be in order.

28. Taxonomic categories which come lower to the rank of class are

(1) Order, phylum, family, species (2) Order, family, genus, species

(3) Division, family, order, genus (4) Order, division, genus, species

Sol. Answer (2)

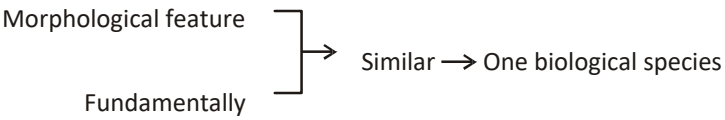


29. Two animals A and B have similar morphological features and are fundamentally similar with each other, they must be treated as

(1) One biological species (2) Two distinct species

(3) One biological genera (4) Two distinct genera

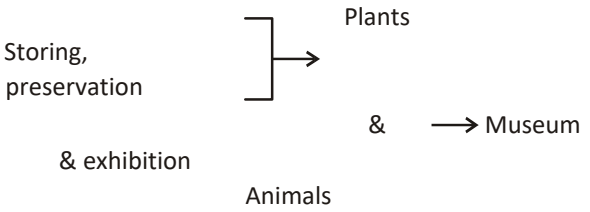
Sol. Answer (1)



30. A place used for storing, preservation and exhibition of both plants and animals is known as

(1) Herbaria (2) Botanical Garden (3) Museum (4) Zoos

Sol. Answer (3)



31. Herbarium consists of

(1) Collection of living plants

(2) Collection of plant and animal specimens preserved in the containers

(3) Preserved insects in boxes after collecting killing and pinning

(4) Herbarium sheets carrying dried, pressed and preserved plant specimens on them

Sol. Answer (4)

Herbarium consists of dried, pressed and preserved plant specimens.

32. National Botanical Research Institute consists of

(1) Dried and preserved plant specimens only

(2) Collection of preserved plant and animal specimens

(3) Flora, manuals and monographs only

(4) Collection of living plants for reference

Sol. Answer (4)

NBRI is a botanical garden, collection of living plants for reference.

33. Key is

(1) A form of herbaria

(2) A type of educational institute

(3) A taxonomical aid used for identifying various organisms

(4) Taxonomic category

Sol. Answer (3)

Key, a taxonomical aid, used for classification.

34. In zoological parks, animals are

(1) Kept and preserved in containers or jars (2) Preserved in boxes after killing

(3) Kept in protected environments under human care (4) Stuffed and then preserved

Sol. Answer (3)

Zoological parks, animals are kept in protected environments under human care.

35. For identifying organisms through key usually

(1) Two contrasting characters are used (2) One similar character is studied

(3) Two or more similar characters are used (4) Only one statement called lead is used

Sol. Answer (1)

Key, a taxonomical aid, has two contrasting characters.

SECTION - B

Objective Type Questions

1. Select correct statement for growth as one of the characteristic of living organisms.

   (1) Growth by increase in mass is a defining property of prokaryotic organisms only

   (2) Non-living objects do not show growth by increase in mass of body

   (3) Intrinsic growth is a characteristic of all living organisms

   (4) Growth can be extrinsic or intrinsic for multicellular organisms

Sol. Answer (3)

Intrinsic growth is a characteristic of all living organisms while in non-living thing extrinsic growth is possible/ occurred.

2. Reproduction is synonymous with growth in

   (1) Most of the fungi and Planaria
   (2) Desmids, diatoms and protozoans
   (3) Cyanobacteria, fungi and mosses
   (4) Mosses, algae and hydra

Sol. Answer (2)

Reproduction is synonymous with growth in unicellular organisms like- desmids, diatoms and protozoans.

3. Carolus Linnaeus is the father of taxonomy because of one of his contributions

   (1) Genera Plantarum

   (2) Binomial nomenclature

   (3) Described nearly ten thousand plants and animal species

   (4) Die Naturlichen Pflanzen Familien

Sol. Answer (2)

Carolus Linnaeus's contribution in taxonomy is – Binomial nomenclature

4. Binomial epithet has

   (1) Two Latin names only

   (2) Two Italics names written in Latin

   (3) Two Latin names and author's name in Italics

   (4) Two Latin names followed by author's name in Roman

Sol. Answer (4)

Binomial epithet has – two Latin names followed by author's name in Roman.

5. Systematics is the study of

   (1) Diversity amongst groups of organisms
   (2) Grouping of organisms
   (3) Identification and grouping of organisms
   (4) Identification, classification and taxonomy

Sol. Answer (1)

Systematics, study of diversity amongst groups of organisms.

6. Which one of the following criteria is/are essential and form the basis of modern taxonomic studies?

(1) Ecological information of organisms (2) Development process
(3) External and internal structure (4) All of these

Sol. Answer (4)

Modern taxonomic studies are

- Ecological information of organisms
- Development process
- External and internal structure

7. Which one of the following is the first publication of Carolus Linnaeus?
(1) Systema Naturae (2) Classes Plantarum (3) Hortus Cliffortianus (4) Hortus Upplandicus

Sol. Answer (4)

Publications of Carolus Linnaeus

- Hortus Upplandicus (First)
- Philosphica Botanica
- Species Plantrum
- Systema Nature

8. Scientific name Rattus rattus is an example of
(1) Binomial nomenclature (2) Tautonyms
(3) Synonyms Sol. (4) Both (1) & (2)

Answer (4)

Rattus rattus

- Binomial nomenclature
- Tautonyms

9. Given organisms belongs to how many genera?

Wheat, Brinjal, Potato, Lion, Dog, Tiger

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

Sol. Answer (3)

Animal		Genera	
Wheat	–	Triticum	
Brinjal & Potato	–	Solanum	Four genera
Lion & Tiger	–	Panthera	
Dog	–	Canis	

10. Organisms which can freely interbreed and produce fertile offspring and have similar coded information or blue print for making these organisms are called
(1) Species (2) Tribe (3) Genus (4) Sub-genus

Sol. Answer (1)

Species – Freely interbreed – Fertile offspring

11. The correct sequence of taxonomic categories is

(1) Division—class—family—tribe—order—genus —species

(2) Division—class—order—family—tribe—genus —species

(3) Phylum—order—class—tribe—family—genus—species

(4) Class—phylum—tribe—order—family—genus—species

Sol. Answer (2)

Hierarchy of taxonomic categories

Kingdom Division Class Order Family Genus Species

12. Two species can be said to be reproductively isolated if they are

(1) Interfertile (2) Not interfertile

(3) Do not grow together in a common habitat (4) Growing together in a common habitat

Sol. Answer (2)

Reproductively isolated two species – Not interfertile

13. A genus having many species is known as

(1) Polytypic (2) Monotypic (3) Polygamic (4) Both (1) & (3)

Sol. Answer (1)

Polytypic genus – A genus having many species

14. In taxonomic hierarchy, which of the following group of taxa will have more number of similarities as compared to other?

(1) Anacardiaceae, Convolvulaceae and Poaceae (2) Polymoniales, Poales and Sapindales

(3) Solanum, Petunia and Atropa (4) Leopard, tiger and lion

Sol. Answer (4)

Orders have less similarities than family, genus and species.

15. In which of the following pair of category, greater is the difficulty of determining the relationship to other taxa at the same level, thus, the problem of classification becomes more complex?

(1) Genus and species (2) Variety and genus

(3) Division and phylum (4) Species and family

Sol. Answer (3)

Higher the categories in hierarchy will be lesser similarities and will show difficulty of determining the relationship to other.

16. Rice, cereals, monocots and plants represent

(1) Different taxa at different level (2) Same taxa of different category

(3) Different category of same taxa (4) Same category for different taxa

Sol. Answer (1)

Rice, Cereals, Monocots, Plants

↓ ↓ ↓ ↓

Species Family Class Kingdom

17. The equivalent rank of Carnivora in taxonomic categories of man and housefly is respectively

(1) Homo and Musca (2) Hominidae and Muscidae

(3) Mammalia and Insecta (4) Primata and Diptera

Sol. Answer (4)

Animal		Order
Lion	–	Carnivora
Man	–	Primata
Housefly	–	Diptera

18. All given are suffixes used for category class, except

(1) -phyta (2) -opsida (3) -phyceae (4) -ae

Sol. Answer (1)

– phyta – Division

– opsida – Class

– phyceae – Class

– ae – Class

19. Biological concept of species was given by _____ and it is based on _____

(1) Lamarck; physiological isolation (2) Linnaeus; morphological isolation

(3) Ernst Mayr; mechanical isolation (4) Ernst Mayr; reproductive isolation

Sol. Answer (4)

Biological concept of species

- Ernst Mayr
- Reproductive isolation

20. Which category comes after phylum in descending order in taxonomic hierarchy?

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

Sol. Answer (3)

Phylum Class

21. Order primata and carnivora are placed in the same class, i.e.

(1) Hominidae (2) Mammalia (3) Insecta (4) Chordata

Sol. Answer (2)

Order → Class

Primata } Mammalia

Carnivora

22. Fishes, amphibians, reptiles and birds are kept in the same

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

Sol. Answer (4)

Animals	Class	Phylum
Fishes	Pisces	Chordata
Amphibians	Amphibians	Chordata
Reptiles	Reptilia	Chordata
Birds	Aves	Chordata

23. Choose odd one out w.r.t. Panthera leo

(1) Common name of tiger
(2) Panthera represents generic name
(3) leo represents specific epithet
(4) Panthera represents higher level of taxon than leo

Sol. Answer (1)

Panthera leo is common name of lion.

24. Potato and brinjal belong to the genus Solanum, which reflects that

(1) They belong to single species

(2) They are a group of related species

(3) They both are morphologically and structurally similar to each other in all respects

(4) They can always produce fertile hybrid

Sol. Answer (2)

Potato and Brinjal are a group of related species.

25. Class mammalia consists of

(1) Order carnivora only
(2) Families like felidae and canidae only
(3) Related orders like carnivora, primata, etc.
(4) All animals belonging to various phyla

Sol. Answer (3)

Order	Class
Carnivora	Mammalia
Primata	

26. Dicots like mango, brinjal and monocot like wheat are placed under a common taxonomic category known as

(1) Phylum – Arthropoda
(2) Phylum – Angiospermae
(3) Division – Angiospermae
(4) Class – Angiospermae

Sol. Answer (3)

Class	Division
Dicot	Angiosperm
Monocot	Angiosperm

27. Rice and brinjal belong to the category ending with suffix

(1) “aceae”
(2) “ales”
(3) “phyta”
(4) “ae”

Sol. Answer (3)

Species	Family	Class	Division
Rice	Poaceae	Monocot	Angiosperm
Brinjal	Solanaceae	Dicot	Angiosperm

28. Various taxonomic categories are

(1) Mere morphological aggregates

(2) Distinct biological entities

(3) International codes used for nomenclature

(4) Collection of organisms on structural similarities only

Sol. Answer (2)

Various taxonomic categories are distinct biological entities

29. Plants belonging to different classes, with a few similar characters are assigned to a category called

(1) Phylum (2) Order (3) Division (4) Genus

Sol. Answer (3)

Class Division Kingdom

30. Amongst the given taxonomic aids, how many are associated with preservation of specimens?

Monograph, Flora, Key, Museums, Botanical gardens, Catalogoue, Herbarium, Manual

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

Sol. Answer (3)

Preservation of specimens is done in taxonomic aids

- Museum
- Herbarium

31. Which of the following chemicals is used for poisoning the specimens in herbarium technique?

(1) Hg_2Cl_2 (2) $AgNO_3$ (3) HCl (4) $HgCl_2$

Sol. Answer (4)

Poisoning chemical for the specimens – $HgCl_2$

32. The international size of herbarium sheet is

(1) 41 × 29 cm (2) 40 × 30 inches (3) 42 × 20 cm (4) 39 × 28 cm

Sol. Answer (1)

International size of herbarium sheet is 41 × 29 cm

33. Find the correct sequence of various steps of herbarium technique

a. Drying b. Poisoning

c. Collection d. Labelling

e. Mounting f. Deposition

g. Stitching

(1) c, a, b, e, g, d, f (2) c, b, d, e, f, g, a (3) c, a, b, e, g, f, d (4) c, a, b, g, e, f, d

Sol. Answer (1)

Correct sequence

Collection Drying Poisoning Mounting Stitching Labelling Deposition

34. Select the correct match

Column I		Column II
a. Ex-situ conservation	(i)	Central national Herbarium
b. Quick referral system	(ii)	Museum
c. Preserved plants and animals	(iii)	Flora
d. Actual account of habitat and distribution of plants of a given area	(iv)	Royal Botanical Gardens, Kew

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

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

Sol. Answer (4)

Ex-situ conservation – Botanical garden
Quick referral – Herbarium
Preserved plants and animals – Museum
Habitat & distribution of plants of a given area – Flora

35. Live specimens are used for reference in taxonomic studies in

(1) Museum (2) Zoological parks
(3) Botanical gardens (4) More than one option is correct

Sol. Answer (4)

Live specimens
– Zoological parks
– Botanical gardens

SECTION - C

Previous Years Questions

1. The label of a herbarium sheet does not carry information on [NEET (Phase-2)-2016]

(1) Date of collection (2) Name of collector
(3) Local names (4) Height of the plant

Sol. Answer (4)

The herbarium sheets carry a label providing information about date and place of collection, english, local and botanical names, family, collector's name.

2. Study the four statements (A–D) given below and select the two correct ones out of them: A. Definition of biological species was given by Ernst Mayr.

B. Photoperiod does not affect reproduction in plants.

C. Binomial nomenclature system was given by R.H. Whittaker.

D. In unicellular organisms, reproduction is synonymous with growth.

The two correct statements are [NEET (Phase-2)-2016]

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

Sol. Answer (3)

Photoperiod affect reproduction in plants.

Bionomial nomenclature system was given by Carolus Linnaeus

3. Nomenclature is governed by certain universal rules. Which one of the following is contrary to the rules of nomenclature? [NEET-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

Sol. Answer (2)

Biological names originate from latin language and printed in italics

4. 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 a taxonomic aid for identification of specimens

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

Sol. Answer (2)

A museum has collection of speciman of plants and animals.

5. Maximum nutritional diversity is found in the group [AIPMT (Prelims)-2012]

(1) Plantae (2) Fungi (3) Animalia (4) Monera

Sol. Answer (4)

6. Which one of the following aspects is an exclusive characteristic of living things? [AIPMT (Mains)-2011]

(1) Perception of events happening in the environment and their memory

(2) Increase in mass by accumulation of material both on surface as well as internally

(3) Isolated metabolic reactions occur in-vitro

(4) Increase in mass from inside only

Sol. Answer (4)

Increase in mass from inside only is an exclusive characteristic of living things.

7. The living organisms can be unexceptionally distinguished from the non living things on the basis of their ability for [AIPMT (Prelims)-2007]

(1) Growth and movement

(2) Responsiveness to touch

(3) Interaction with the environment and progressive evolution

(4) Reproduction Sol. Answer (2)

Defining features are

- Metabolism
- Consciousness
- Cellular structure

8. ICBN stands for [AIPMT (Prelims)-2007]

(1) Indian Code of Botanical Nomenclature (2) Indian Congress of Biological Names

(3) International Code of Botanical Nomenclature (4) International Congress of Biological Names

Sol. Answer (3)

ICBN International Code of Botanical Nomenclature.

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

(1) Have same number of chromosomes

(2) Can reproduce freely with each other and form seeds

(3) Have more than 90 per cent similar genes

(4) Look similar and possess identical secondary metabolites

Sol. Answer (2)

Two same species can reproduce freely with each other and form seeds.

10. Biosystematics aims at

(1) The classification of organisms based on broad morphological characters

(2) Delimiting various taxa of organisms and establishing their relationships

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

(4) Identification and arrangement of organisms on the basis of their cytological characteristics

Sol. Answer (3)

Biosystematics – Classification based on their ontogeny and phylogeny.

11. The common characteristics between tomato and potato will be maximum at the level of their

(1) Genus (2) Family (3) Order (4) Division

Sol. Answer (2)

Tomato and Potato will be maximum at the family level.

12. Taxonomic hierarchy refers to

(1) Step-wise arrangement of all categories for classification of plants and animals

(2) A group of senior taxonomists who 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

Sol. Answer (1)

Taxonomic hierarchy, step-wise arrangement of all categories for classification of plants and animals.

13. 'Taxon' is the unit of

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

Sol. Answer (2)

Taxon is the unit of taxonomy.

14. The closely related morphologically similar sympatric populations, but reproductively isolated, are designated as

(1) Clones (2) Sibling species(3) Clines (4) Demes

Sol. Answer (2)

Sibling species :

- Morphologically similar sympatric populations
- Reproductively isolated

15. Which of the following is least general in characters as compared to genera?

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

Sol. Answer (1)

Species is least general in characters as compared to genera.

16. Species is considered as

(1) Real basic unit of classification

(2) The lowest unit of biosystematics

(3) Artificial concept of human mind which cannot be defined in absolute terms

(4) Real units of classification devised by taxonomists

Sol. Answer (1)

Species is real basic unit of classification.

17. Which of the following is not true for a species?

(1) Members of a species can interbreed

(2) Gene flow does not occur between the populations of a species

(3) Each species is reproductively isolated from every other species

(4) Variations occur among members of a species

Sol. Answer (2)

Gene flow occurs between the populations of a species.

18. One of the most important function of botanical gardens is that

(1) They provide a beautiful area for recreation (2) One can observe tropical plants there

(3) They allow ex-situ conservation of germplasm (4) They provide the natural habitat for wildlife

Sol. Answer (3)

Botanical gardens – Ex-situ conservation of germplasm.

SECTION - D

Assertion - Reason Type Questions

1. A : Members of a species are reproductively isolated from the members of other species.

R : Species is the basic taxonomic category.

Sol. Answer (2)

Assertion & Reason both are corect but not explanation of assertion.

2. A : Panthera is a polytypic genera.

R : Panthera has specific epithets like leo, tigris, pardus.

Sol. Answer (1)

Panthera is a polytypic genera because it has more than two specific epithets like – leo, tigris, pardus.

3. A : A group of closely related families form an order.

R : The families of an order show close resemblance in certain fundamental features and also in evolutionarytrends.

Sol. Answer (1)

Assertion and reason both are correct and also correct explanation.

4. A : Biological concept of species is based on reproductive isolation.

R : Most accepted species concept was given by Linnaeus.

Sol. Answer (3)

Biological concept of species, given by Ernst Mayr.

5. A : Synonyms are concerned with one of the most important rules of ICBN.

R : Out of the two or more scientific names given to the organism, the oldest name is recognized as valid nameand other names are recognised as synonyms.

Sol. Answer (1)

Assertion and Reason both are correct and correct explanation.

6. A : Botanical gardens are ex-situ conservation strategy of plants.

R : National Botanical Garden is situated at Howrah.

Sol. Answer (3)

National Botanical Garden is situated at Lucknow.

7. A : Two plants A and B are treated as two taxonomic species.

R : Both A and B are different in correlated characters.

Sol. Answer (1)

Assertion and Reason both are correct and also gives correct explanation.

8. A : Species is a genetically closed system.

R : Because the reproductive isolation constitutes the most important boundary between different species.

Sol. Answer (1)

Species is a genetically closed system because the reproductive isolation constitutes the most important boundary between different species.

9. A : Scientific names for plants have been standarized through ICBN.

R : Naming system which uses three word format was given by Linnaeus.

Sol. Answer (3)

Trinomial nomenclature was given by Lamark.

10. A : Dried specimens are poisoned by $HgCl_2$.

R : It protects the specimen from the moisture.

Sol. Answer (3)

$HgCl_2$ protects the specimen from the microbes.