



BIOLOGY

NEET & AIIMS

THE LIVING WORLD

Example Solution

1. What is growth?

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2. Give two examples of organisms which reproduce by fragmentation

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3. What is metabolism?

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4. Give an instance to show that plants respond to stimuli.

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5. What do you mean by biodiversity?

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6. What do you mean by nomenclature?

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7. Who developed the system of binomial nomenclature?



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8. Define taxonomy.



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9. What do you understand by taxonomic hierarchy?



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10. Define a species



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11. Name the genus to which potato, brinjal and makoi belong.



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12. Name the higher category in taxonomic hierarchy which comes immediately after Genus.

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13. In which category organisms of related families are placed?

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14. Name the class in which organisms like rabbits, cats, dogs are kept.

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15. Which is the immediate higher category than class in taxonomical hierarchy?

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16. Name the highest category in taxonomic hierarchy.

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17. What is the prime source of taxonomic studies?

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18. Name the place where one can find various plant specimens with relevant information and mounted on sheets.

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19. What are botanical gardens?

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20. How are plants, animals and other organisms kept in museum?

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21. Name one zoological park of Asia.

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22. What is a key?

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23. Name any two means used for taxonomical studies which comprise of recorded descriptions of plants and animals without any kind of their specimens.

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1. Select incorrect statement w.r.t. growth

- A. Increase in body mass is criterion for growth in non-living objects
- B. Animals grow upto a certain age
- C. Growth in plants is definite always
- D. In living organisms, growth is from inside

Answer: C



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2. Regeneration can be observed in

- A. Fungi
- B. Planaria
- C. Hydra

D. More than one option is correct

Answer: D



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3. Taxonomially, known number of species is-

A. 1.7 billion

B. 17 lakh

C. 5 to 30 million

D. 17 million

Answer: B



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4. Which one of the following character is common in classical taxonomy and modern taxonomic studies ?

- A. Morphological characters
- B. Development process
- C. Genetical characters
- D. Ecological information of organisms

Answer: A



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5. Term systematics was derived from..... Word "Systema" which means.....

- A. Greek, Evolutionary classification
- B. Latin, systematic arrangement of organisms
- C. English, Taxonomy of organisms

D. Both (1) & (3)

Answer: B



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6. No names are recognised prior to those used by Linnaeus in 1758 in the 10th edition of

A. System Naturae

B. Species Plantarum

C. Genera Plantarum

D. Philosophia Botanica

Answer: A



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7. Select the wrong statement about the rules of binomial nomenclature.

- A. Biological names are generally in italics and written in Latin
- B. Generic name starts with capital letter
- C. Both names are separately underlined to indicate their Latin origin
- D. Author's name is written after the scientific name in Roman type

Answer: A



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8. Correct binomial epithet of garden pea is

- A. *Pisum sativum*
- B. *Pisum sativum* Linn
- C. *Pisum sativum* Linn
- D. *Pisum Sativum* Linn

Answer: C



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9. Which one of the following scientific name represents trinomial nomenclature of an animal?

- A. *Acacia nilotica indica*
- B. *Brassica oleracea botrytis*
- C. *Corvus splendens*
- D. More than one option is correct

Answer: C



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10. Standardisation of scientific name for plants is done by

A. ICBN

B. ICNB

C. ICNCP

D. Both (1) & (3)

Answer: D



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11. Which one of the following group of taxa does not represent similar category in hierarchy?

A. Potato, brinjal and tomato

B. Tiger, lion and leopard

C. Wheat, monocots and angiosperms

D. Wheat, rice and mango

Answer: C

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12. Which one of the following obligate category in taxonomic hierarchy will have maximum number of common characters?

- A. Family
- B. Class
- C. Order
- D. Species

Answer: D

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13. Select incorrect match w.r.t. mango

- A. Family - Anacardiaceae
- B. Order - Sapindaceae

C. Class - Dicotyledonae

D. Division - Angiospermae

Answer: B



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14. Select correct statement

A. Tomato, dicots and plants represent same taxa at different levels

B. Species is genetically open system

C. A breed of tiger and lion is a fertile true species

D. Biological concept of species is based on reproductive isolation

Answer: D



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15. Which of the following taxonomical aid is related with quick referral systems in taxonomic studies?

- A. National Zoological Park, Delhi
- B. NMNH, Delhi
- C. Central National Herbarium, Calcutta
- D. Both (1) & (2)

Answer: C



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16. Select the odd one out w.r.t. Botanical gardens

- A. Collection of living plants for reference
- B. Indian Botanical garden is at Howrah
- C. Collection of preserved plants and animals specimens
- D.

Answer: D



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17. Read the following statements carefully and select correct option

- (a) In zoological parks, conditions similar to natural habitats are provided to animals
- (b) Keys are generally analytical in nature
- (c) In herbarium sheet, local names are not mentioned
- (d) Taxonomical aids are useful in knowing bioresources

A. Only (a) & (b)

B. (a), (c) & (d)

C. (a), (b) & (d)

D. All of the above

Answer: C



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18. Which of the following includes the alphabetical arrangement of species of a particular place describing features?

- A. Manuals
- B. Catalogues
- C. Monograph
- D. Flora

Answer: B



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19. Match column-I with column-II

Column-I		Column-II
a. Museum	(i)	Information on one taxon
b. Herbaria	(ii)	Couplet
c. Botanical gardens	(iii)	Arranged on universally accepted classification
d. Taxonomic key	(iv)	Educational institutes
	(v)	Records of local flora for monographic work

A. a(iv), b)(iii), c(v), d(ii)

B. a(iii), b(v), c(i), d(ii)

C. a(iv), b(i), c(iii), d(v)

D. a(v), b(iii), c(iv), d(ii)

Answer: A



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20. Select the incorrect statement

A. Museums often have collections of skeletons

B. Separate taxonomic keys are required for each taxonomic category

C. Taxonomic keys are based on the contrasting characters

D. Monograph is useful in providing information for identifications of names of species found in an area

Answer: D



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Assignment Section A

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

- A. Growth
- B. Repair
- C. Metabolism
- D. Reproduction

Answer: C



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2. Mark the incorrect pair

- A. Hydra - Budding

B. Flatworm - Regeneration

C. Amoeba - Fragmentation

D. Yeast - Budding

Answer: C



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3. Which of the following is incorrect for reproduction?

A. Unicellular organisms reproduce by cell-division

B. Reproduction is a characteristic of all living organisms

C. In unicellular organisms, reproduction and growth are linked together

D. Non-living objects are incapable of reproducing

Answer: B



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

- A. Microbes exhibit the metabolism
- B. It is the property of all living forms
- C. The metabolic reactions can be demonstrated in vitro
- D. It is not a defining feature of life forms

Answer: D



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5. Non-living objects exhibits/show

- A. Property of self-replication
- B. Evolution
- C. Self-regulating interactive systems

D. Reversible growth

Answer: D



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

- A. The growth occurs from outside
- B. The growth is reversible
- C. The growth is due to the accumulation of material on the surface
- D. The growth is intrinsic

Answer: D



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7. Local names of various plants and animals

- A. Help in recognising organisms worldwide
- B. Are used universally
- C. Are specific and distinct names
- D. Vary from place to place

Answer: D



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

- A. Biological names are generally in Latin
- B. The first word in a biological name represents the genus
- C. Biological names are printed in italics
- D. The first word of the genus starts with a small letter

Answer: D



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

Mangifera indica Linn

C B A

- A. Generic name, specific name and author's name
- B. Specific name, generic name and author's name
- C. Author's name, specific name and generic name
- D. Generic name, author's name and specific name

Answer: C



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

- A. These are also known as common names
- B. These ensure that each organisms has only one name
- C. These have two components - the generic name and specific epithet
- D. These are universally accepted names

Answer: A

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11. According to binomial nomenclature, every living organism has

- A. Two scientific names with single component
- B. One scientific name with two components
- C. Two names, one Latin and other common
- D. One common name with three components

Answer: B

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

- A. A group of individual organisms with fundamental similarities
- B. Two different species breed together to produce fertile offsprings
- C. Human beings belong to the species sapiens
- D. Panthera has many specific epithet as tigris, leo and pardus

Answer: B



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13. Taxonomy deals with

- A. Development of zoological parks
- B. Study of kinds and diversity of microorganisms only
- C. Evolutionary relationship between organisms

D. Classification of diverse organisms in different taxa

Answer: D



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

A. They consists of two components

B. They have Latin origin

C. They always have "linn" abbreviation at the en of second component

D. They are printed in italics

Answer: C



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

- A. First classification then identification, nomenclature and characterisation
- B. First identification then classifying organisms and then characterisation and nomenclature
- C. First nomenclature then characterisation, identification and classification
- D. First characterisation then identification and nomenclature and then classification

Answer: D



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

- A. Generic name and specific epithet should be in Latin words
- B. Generic name is immediately followed by name of taxonomists two described it firstly
- C. Generic name must begin with capital letter
- D. All letters of the specific name must be small

Answer: B



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17. Find the correct sequence of taxonomic categories

- A. Division → Kingdom → Genus → Order
- B. Species → Genus → Family → Order
- C. Class → Order → Family → Division

D. Kingdom → Class → Species → Order

Answer: B



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18. Which of the following is a class?

A. Mammalia

B. Sapindales

C. Primata

D. Poales

Answer: A



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

A. Class

B. Genus

C. Species

D. Order

Answer: D



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20. Fill in the blanks A and B

Kingdom → Phylum → [A] → Order → [B]

A. A - Genus, B - Species

B. A - Family, B - Class

C. A - Class, B - Family

D. A - Species, B - Division

Answer: C



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21. Match the following columns

Column-I

- a. Binomial nomenclature (i)
- b. Generic name (ii)
- c. Family (iii)
- d. Systema naturae

Column-II

- Carolus Linnaeus
- Muscidae
- Panthera

A. a(i), b(ii), c(iii), d(ii)

B. a(i), b(iii), c(ii), d(i)

C. a(ii), b(i), c(i), d(iii)

D. a(iii), b(i), c(ii), d(i)

Answer: B



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22. Genus is a category which comes in between the

- A. Family and Species
- B. Class and Family
- C. Order and Phylum
- D. Kingdom and Class

Answer: A



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

- A. Poaceae
- B. Anacardiaceae
- C. Hominidae
- D. Solanaceae

Answer: D



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24. Cat and dog are placed in which families respectively

- A. Felidae and Hominidae
- B. Muscidae and Felidae
- C. Poaceae and Canidae
- D. Felidae and Canidae

Answer: D



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

A. Ecological information of organisms

B. Development process

C. External and internal structure

D. External structure

Answer: D



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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?

A. Genus and species

B. Tribe and genus

C. Division and phylum

D. Species and family

Answer: C



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

- A. Solanaceae, Convolvulaceae and Poaceae
- B. Polymoniales, Poales and Sapindales
- C. Solanum, Petunia and Atropa
- D. Leopard, tiger and lion

Answer: B



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

A. Order, phylum, family, species

B. Order, family, genus, species

C. Division, family, order, genus

D. Order, division, genus, species

Answer: B



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

A. One biological species

B. Two distinct species

C. One biological genera

D. Two distinct genera

Answer: A

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

- A. Herbaria
- B. Botanical Garden
- C. Museum
- D. Zoos

Answer: C

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31. Herbarium consists of

- A. Collection of living plants

B. Collection of plant and animals specimens preserved in the containers

C. Preserved insects in boxes after collecting killing and pinning

D. Herbarium sheets carrying dried, pressed and preserved plant specimens on them

Answer: D



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32. National Botanical Research Institute consists of

A. Dried and preserved plant specimens only

B. Collection of preserved plant and animals specimens

C. Flora, manuals and monographs only

D. Collection of living plants for reference

Answer: D



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33. Key is

- A. A form of herbaria
- B. A type of educational institue
- C. A taxonomical aid used for identifying various organisms
- D. Taxonomic category

Answer: C



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34. In zoological parks, animals are

- A. Kept and preserved in containers or jars
- B. Preserved in boxes after killing
- C. Kept in protected environments under human care

D. Stuffed and then preserved

Answer: C



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35. For identifying organisms through key usually

- A. Two contrasting characters are used
- B. One similar character is studied
- C. Two or more similar characters are used
- D. Only one statement called lead is used

Answer: A



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

- A. Growth by increase in mass is a defining property of prokaryotic organisms only
- B. Non-living objects do not show growth by increase in mass of body
- C. Intrinsic growth is a characteristic of all living organisms
- D. Growth can be extrinsic or intrinsic for multicellular organisms

Answer: C

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2. Reproduction is synonymous with growth in

- A. Most of the fungi and Planaria
- B. Desmids, diatoms and protozoans
- C. Cyanobacteria, fungi and mosses

D. Mosses, algae and hydra

Answer: B



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

A. Genera Plantarum

B. Binomial nomenclature

C. Described nearly ten thousand plants and animal species

D. Die Naturlichen Pflanzen Familien

Answer: B



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4. Binomial epithet has

- A. Two Latin names only
- B. Two Italics names written in Latin
- C. Two Latin names and author's name in Italics
- D. Two Latin names followed by author's name in Roman

Answer: D



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5. Systematics is the study of

- A. Diversity amongst groups of organisms
- B. Grouping of organisms
- C. Identification and grouping of organisms
- D. Identification, classification and taxonomy

Answer: A



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6. What are the essential basis of modern taxonomic studies?

- A. Ecological information of organisms
- B. Development process
- C. External and internal structure
- D. All of these

Answer: D



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7. Which one of the following is the first publication of Carolus Linnaeus?

- A. Systema Naturae

B. Classes Plantarum

C. Hortus Cliffortianus

D. Hortus Upplandicus

Answer: D



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8. Scientific name *Rattus rattus* is an example of

A. Binomial nomenclature

B. Tautonyms

C. Synonyms

D. Both (1) & (2)

Answer: D



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9. Given organisms belongs to how many genera?

Wheat, Brinjal, Potato, Lion, Dog, Tiger

A. Three

B. Two

C. Four

D. Five

Answer: C



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10. Organisms which can freely interbreed and produce fertile offspring and have similar coded information or blue print for making these organisms are called

A. Species

B. Tribe

C. Genus

D. Sub-genus

Answer: A



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11. The correct sequence of taxonomic categories is

A. Division-class-family-tribe-order-genus-species

B. Division-class-order-family-tribe-genus-species

C. Phylum-order-class-tribe-family-genus-species

D. Class-phylum-tribe-order-family-genus-species

Answer: B



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

- A. Interfertile
- B. Not interfertile
- C. Do not grow together in a common habitat
- D. Growing together in a common habitat

Answer: B



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13. A genus having many species is known as

- A. Polytypic
- B. Monotypic
- C. Polygamic
- D. Both (1) & (3)

Answer: A



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

- A. Anacardiaceae, Convolvulaceae and Poaceae
- B. Polymoniales, Poales and Sapindales
- C. Solanum, Petunia and Atropa
- D. Leopard, tiger and lion

Answer: D



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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?

- A. Genus and species
- B. Variety and genus
- C. Division and phylum
- D. Species and family

Answer: C



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16. Rice, cereals, monocots and plants represent

- A. Different taxa at different level
- B. Same taxa of different category
- C. Different category of same taxa
- D. Same category for different taxa

Answer: A



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

- A. Homo and Musca
- B. Hominidae and Muscidae
- C. Mammalia and Insecta
- D. Primata and Diptera

Answer: D



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

- A. -phyta
- B. -opsida

C. –phyceae

D. –ae

Answer: A



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

A. Lamarck, physiological isolation

B. Linnaeus, morphological isolation

C. Ernst Mayr, mechanical isolation

D. Ernst Mayr, reproduction isolation

Answer: D



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

- A. Genus
- B. Family
- C. Class
- D. Species

Answer: C



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

- A. Hominidae
- B. Mammalia
- C. Insecta
- D. Chordata

Answer: B



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

- A. Order
- B. Class
- C. Genus
- D. Phylum

Answer: D



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

- A. Common name of tiger

- B. Panthera represents generic name
- C. Leo represents specific epithet
- D. Panthera represents higher level of taxon than leo

Answer: A



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

- A. They belong to single species
- B. They are a group of related species
- C. They both are morphologically and structurally similar to each other in all respects
- D. They can always produce fertile hybrid

Answer: B



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25. Class mammalia consists of

- A. Order carnivora only
- B. Families like felidae and canidae only
- C. Related orders like carnivora, primata, etc
- D. All animals belonging to various phyla

Answer: C



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

- A. Phylum - Arthropoda
- B. Phylum - Angiospermae
- C. Division - Angiospermae

D. Class - Angiospermae

Answer: C



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

A. 'aceae'

B. 'ales'

C. 'phyta'

D. 'phyceae'

Answer: C



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28. Various taxonomic categories are

- A. Mere morphological aggregates
- B. Distinct biological entities
- C. International codes used for nomenclature
- D. Collection of organisms on structural similarities only

Answer: B



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29. In case of plants, classes with a few similar characters are assigned to a higher category called.

- A. Phylum
- B. Order
- C. Division
- D. Genus

Answer: C

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

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

A. One

B. Three

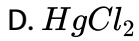
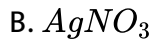
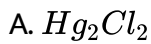
C. Two

D. Four

Answer: C

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



Answer: D



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32. The international size of herbarium sheet is

A. $41 \times 29cm$

B. $40 \times 30 cm$

C. $42 \times 20cm^2$

D. $39 \times 28cm^2$

Answer: A



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

- (a) Drying
- (b) Poisoning
- (c) Collection
- (d) Labeling
- (e) Mounting
- (f) Deposition
- (g) Stitching

A. c, a, b, e, g, d, f

B. c, b, d, e, f, g, a

C. c, a, b, e, g, f, d

D. c, a, b, g, e, f, d

Answer: A



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34. Select the correct match

Column-I

- a. Ex-situ conservation (1)
- b. Quick referral system (1)
- c. Preserved plants and animals (1)
- d. Actual account of habitat and distribution of plants of a given area (1)

A. a(ii), b(iii), c(iv), d(i)

B. a(i), b(iv), c(ii), d(iii)

C. a(iv), b(i), c(iii), d(ii)

D. a(iv), b(i), c(ii), d(iii)

Answer: D



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

A. Museum

B. Zoological parks

C. Botanical gardens

D. More than one option is correct

Answer: D



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Assignment Section C

1. The label of a herbarium sheet does not carry information on

A. Date of collection

B. Name of collector

C. Local names

D. Height of the plant

Answer: D



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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 Ernst Whittaker

(D) In unicellular organisms, reproduction is synonymous with growth

The two correct statements are

A. B and C

B. C and D

C. A and D

D. A and B

Answer: C



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

- A. When written by hand, the names are to be underlined
- B. Biological names can be written in any language
- C. The first word in a biological name represents the genus name and the second is a specific epithet
- D. The names are written in Latin and are italicised

Answer: B



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4. Which one of the following is not a correct statements?

- A. Botanical gardens have collection of living plants for reference
- B. A museum has collection of photographs of plants and animals
- C. Key is a taxonomic aid for identification of specimens

D. Herbarium houses dried, pressed and preserved plant specimens

Answer: B



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5. Maximum nutritional diversity is found in the group

A. plantae

B. Fungi

C. Animalia

D. Monera

Answer: D



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6. Which one of the following aspects is a exclusive characteristic of living things?

- A. Perception of events happening in the environment and their memory
- B. Increase in mass by accumulation of material both on surface as well as internally
- C. Isolated metabolic reactions occur in-vitro
- D. Increase in mass from inside only

Answer: D

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7. The living organisms can be undexceptionally distinguished from the non - living things on the basis of their ability for

- A. Growth and movement

B. Responsiveness to touch

C. Interaction with the environment and progressive evolution

D. Reproduction

Answer: B



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8. ICBN stands for

A. Indian Code of Botanical Nomenclature

B. Indian Congress of Biological Names

C. International code of Botanical Nomenclature

D. International Congress of Biological Names

Answer: C



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9. Two plants can be conclusively said to belong to the same species if they

- A. Have same number of chromosomes
- B. Can reproduce freely with each other and form seeds
- C. Have more than 90 per cent similar genes
- D. Look similar and possess identical secondary metabolites

Answer: B



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10. Biosystematics aims at

- A. The classification of organisms based on broad morphological characters
- B. Delimiting various taxa of organisms and establishing their relationships

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

D. Identification and arrangement of organisms on the basis of their cytological characteristics

Answer: C



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

A. Genus

B. Family

C. Order

D. Division

Answer: B



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12. Taxonomic hierarchy refers to

- A. Step-wise arrangement of all categories for classification of plants and animals
- B. A group of senior taxonomists who decide the nomenclature of plants and animals
- C. A list of botanists or zoologists who have worked on taxonomy of a species or group
- D. Classification of a species based on fossil record

Answer: A



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13. Taxon' is the unit of

- A. Order carnivora only
- B. Taxonomy
- C. Species
- D. Genus

Answer: B



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14. Closely related, morphologically similar reproductively isolated sympatric populations are designated as

- A. Clones
- B. Sibling species
- C. Clines
- D. Demes

Answer: B



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15. which of the following is less general in characters as compared to genus

A. Species

B. Division

C. Class

D. Family

Answer: A



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16. Species are considered as

- A. Real basic unit of classification
- B. The lowest unit of biosystematics
- C. Artificial concept of human mind which cannot be defined in absolute terms
- D. Real units of classification devised by taxonomists

Answer: A

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

- A. Member of a species can interbreed
- B. Gene flow does not occur between the populations of a species
- C. Each species is reproductively isolated from every other species
- D. Variations occur among members of a species

Answer: B



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

- A. They provide a beautiful area for recreation
- B. One can observe tropical plants there
- C. They allow ex-situ conservation of germplasm
- D. They provide the natural habitat for wildlife

Answer: C



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Assignment Section D

1. Assertion: Members of a species are reproductively isolated from others belonging to other species.

Reason: Species is the basic taxonomic category.

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion
- B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion
- C. If Assertion is true statement but Reason is false
- D. If both Assertion and Reason are false statements

Answer: B



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2. A : Panthera is a polytypic genera

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

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion

C. If Assertion is true statement but Reason is false

D. If both Assertion and Reason are false statements

Answer: A

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

Reason: The families of an order show close resemblance in certain fundamental features and also in evolutionary trends

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion

C. If Assertion is true statement but Reason is false

D. If both Assertion and Reason are false statements

Answer: A

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

R : Most accepted species concept was given by Linnaeus

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion

C. If Assertion is true statement but Reason is false

D. If both Assertion and Reason are false statements

Answer: C

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5. Assertion: Synonyms are the most important of all rules of ICBN.

Reason: Out of the two or more scientific names given to the organism, the oldest name is recognized as valid name and other names as synonyms

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion
- B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion
- C. If Assertion is true statement but Reason is false
- D. If both Assertion and Reason are false statements

Answer: A



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

R : National Botanical Garden is situated at Howrah

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion
- B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion
- C. If Assertion is true statement but Reason is false
- D. If both Assertion and Reason are false statements

Answer: C



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

Reason: Both A and B are different in correlated morphological characters

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion
- B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion
- C. If Assertion is true statement but Reason is false
- D. If both Assertion and Reason are false statements

Answer: A



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8. Assertion: Species is a genetically closed system.

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

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion

C. If Assertion is true statement but Reason is false

D. If both Assertion and Reason are false statements

Answer: A

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

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

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion

C. If Assertion is true statement but Reason is false

D. If both Assertion and Reason are false statements

Answer: C

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

Reason: It prevents the specimen from moisture

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion
- B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion
- C. If Assertion is true statement but Reason is false
- D. If both Assertion and Reason are false statements

Answer: C

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Try Yourself

1. Which of the following shows extrinsic growth?

- A. Snow mountain
- B. Bacteria
- C. Euglena
- D. Spirogyra

Answer: A



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2. Growth in living organisms occurs by

- A. Division of cells
- B. Increase in mass of the living structure

C. Accumulation of material by external agency

D. Both (1) & (2)

Answer: D



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3. Amoeba reproduces by

A. Regeneration

B. Fragmentation

C. Fission

D. Budding

Answer: C



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4. Which of the following pair is correctly matched
A. Fungi - Regeneration
B. Mosses - Fragmentation
C. Planaria - Budding

A. (i) & (ii)

B. Both (i) & (iii)

C. Only (ii)

D. Only (iii)

Answer: C



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5. Metabolic reaction involves

A. Synthesis of biomolecules only

B. Breakdown of some biomolecules only

C. All physical changes which occur in objects around us

D. All chemical reactions which occur inside an organism

Answer: D



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6. When green plants capture sunlight and utilise it to synthesize glucose, the reaction-involved during this process are said to be

- A. Catabolic reactions
- B. Anabolic reactions
- C. Decomposition reactions
- D. Chain reactions

Answer: B



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7. Sensitivity is the

- A. Ability to grow
- B. Ability to reproduce
- C. Ability to detect changes in the environment
- D. Ability to capture sunlight

Answer: C

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8. Which is not a feature of all living organisms?

- A. Metabolism
- B. Cellular organisation
- C. Self-consciousness
- D. Consciousness

Answer: C

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9. Identification is the process of

- A. Naming living organism
- B. Recognising the characteristic features of an organism
- C. Categorising living organism
- D. Discovering new species of plants and animals

Answer: B



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10. International Code of Zoological Nomenclature set rules for scientific naming of

- A. Plants
- B. Fungi
- C. Animals

D. Virus

Answer: C



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11. Naming system accepted universally is known as

- A. Vernacular names
- B. Zoological nomenclature
- C. Binomial nomenclature
- D. Botanical nomenclature

Answer: C



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12. Scientific names are generally taken from

A. Sanskrit language

B. Latin language

C. Hindi language

D. Greek language

Answer: B



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13. Classification of organisms is required because

A. It makes the study of organisms easier and simpler

B. It enables us to study geographical distribution of some organisms

C. It makes the study of organisms complex

D. It leads to ambiguity in study of various organisms

Answer: A



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14. The word 'taxon' signifies

- A. Scientific name of an organism
- B. Development process of an organism
- C. Taxonomic group of any rank
- D. Ecological importance of an organism

Answer: C



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15. The number of obligate categories which are always used in a taxonomic hierarchy are

- A. Five
- B. Six
- C. Seven

D. Four

Answer: C



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16. The lowest category in taxonomic hierarchy is

A. Taxon

B. Rank

C. Species

D. Genus

Answer: C



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17. Pick the incorrect statement about species

- A. Each species has some distinct morphological features than other species
- B. The group of organisms in a particular species freely interbreed among themselves
- C. The second part of biological name consists of specific name
- D. Each species may have one or more genus

Answer: D



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18. The specific epithet in *Solanum tuberosum* and *canis familiaris* respectively is

- A. *tuberosum* and *Canis*
- B. *Solanum* and *familiaris*
- C. *tuberosum* and *familiaris*

D. Solanum and canis

Answer: C



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19. All related species are kept under

- A. One common genus
- B. Different genus due to different evolutionary courses
- C. Various groups according to the similarities and differences
- D. Different higher taxa on basis of morphological differences

Answer: A



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20. Find the correct match

(a) tuberosum - Panthera (b) pardus - Canis

(c) lupus - Canis (d) aureus - Solanum

A. Only (a) & (c)

B. (a), (b) & (c)

C. (b), (c) & (d)

D. Only (c)

Answer: D



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21. Various groups of related genera are kept in

A. A single species

B. A single family

C. Many species but single family

D. In taxon which comes lower to genus

Answer: B



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22. Solanaceae is a

- A. Single family of related genera
- B. Species name of potato
- C. Taxon of similar genus like Allium, Colchicum
- D. Local name of tomato

Answer: A



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23. Carnivora includes

- A. Group of organisms belonging to related genera
- B. Group of organisms belonging to related species
- C. Group of organisms belonging to related families
- D. Group of organisms which are similar in all features

Answer: C

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24. The order Polymoniales consists of

- A. Canidae and Felidae like families
- B. Solanum and Petunia like genera
- C. lupus and familiaris like species
- D. Convolvulaceae and Solanaceae like families

Answer: D

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25. The group of organisms belonging to one or more related orders are assigned to

- A. Different class but same family
- B. Same class on basis of a few similar characters
- C. Any taxa lower to order, in taxonomical hierarchy
- D. Same family due to similar morphological characters

Answer: B



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26. Different organisms belonging to different orders are placed in a single class due to the fact that

- A. They have all similar morphological and reproductive characters
- B. They have similar place of origin

C. They share a common habitat

D. They have few similar or common characters

Answer: D



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27. Which of the following represents "Phylum"?

A. Mammalia

B. Chordata

C. Solanum

D. Carnivora

Answer: B



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28. Chordata includes

- A. Fishes, birds
- B. Mammals, reptiles
- C. Aves, reptilia
- D. All of these

Answer: D



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29. From species to kingdom, the number of common characteristics among organisms goes on

- A. Increasing
- B. Increasing upto taxon family then further decreases
- C. Decreasing
- D. Decreasing upto class then increases afterwards

Answer: C



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30. All plants are included in

- A. Division - Angiospermae
- B. Class - Dicotyledonae
- C. Kingdom - Animalia
- D. Kingdom - Plantae

Answer: D



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31. Taxonomic study of various species of plants, animals and other organisms is useful for human beings because it helps in field of

A. Agriculture

B. Industry

C. Forestry

D. All of these

Answer: D



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32. Taxonomic study of a newly discovered organism is done by

A. Identifying it, only

B. Gathering information about its habitat and habit only

C. Collecting its actual specimen and then identifying and classifying it

D. Studying previously recorded information about various other organisms

Answer: C



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33. In Herbarium, actual finely preserved specimens of _____ are systematically arranged

A. Animals

B. Plants

C. Bacteria

D. Fungi

Answer: B



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34. Herbarium sheets provide information about

A. Place from where animal specimen is collected

B. Place and date on which plant specimen was collected

C. Only botanical name of the plant specimen mounted on it

D. Date, place and local name of acellular organisms mounted on such sheets

Answer: B



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35. Botanical gardens consist of

A. Dried and preserved plant specimens

B. Living plants and animals specimens

C. Living plants specimens

D. Dead specimens of plants are preseved in jars

Answer: C



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36. A famous botanical garden known as Royal Botanical Garden is located in

- A. Lucknow, India
- B. Kew, England
- C. Howrah, India
- D. Darjeeling, India

Answer: B



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37. In museum, specimens are preserved carefully so that they can be used for

- A. Research purposes
- B. Study of breeding among plants and animals
- C. Exhibition

D. More than one option is correct

Answer: D



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38. In museums, insects are preserved by

- A. Pinning without killing them and then preserving in containers
- B. Killing, pinning and then mounting in special boxes
- C. Mounting them alive in jars with various preservative solutions
- D. Killing, pinning and then stuffing them

Answer: B



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39. The place where wild animals are kept in captivity, under human care is known as

- A. Herbarium
- B. Museum
- C. Botanical gardens
- D. Zoological parks

Answer: D



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40. Animals in zoological parks are kept in

- A. Fully man-made environment
- B. Containers with preservative solutions
- C. Conditions similar to natural habitats
- D. Herbarium sheets

Answer: C



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41. A taxonomical key is used for

- A. Conserving various plant species
- B. Identification of plants and animals
- C. Studying geography of a plant
- D. Nomenclature of plants and animals

Answer: B



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42. Each statement of the key is called

- A. Couplet

B. Taxon

C. Lead

D. Category

Answer: C



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43. Flora contains

A. Dead specimens of plants which are carefully preserved

B. Collections of skeletons of animals only

C. Actual account of habitat and distribution of plants of a given area

D. Information on any one taxon of plants

Answer: C



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44. Information about any one taxon of plants or animals can be found in

A. Museum

B. Herbarium

C. Monograph

D. Flora

Answer: C



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