



BIOLOGY

BOOKS - TRUEMAN BIOLOGY

THE LIVING WORLD

Multiple Choice Questions

1. Which of the following promotes similarity among living things

A. Classification of organisms

B. Natural selection in different environment

C. Inheritance from a common ancestor

D. Homeostatic regulation.

Answer: B



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2. Which of the following promotes diversity among living things?

A. Classification of organisms

B. Natural selection in different environment

C. Inheritance from a common ancestor

D. Homeostatic regulation

Answer: C



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3. Arrangement and coordination of smaller components into larger ones is

A. aggregation

B. interaction

C. organisation

D. coordination

Answer: C



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4. Regulation of organisation occurs through

A. flow of information

B. aggregation and interaction

C. entropy and flow of energy

D. aggregation, interaction, equilibrium and
change

Answer: D



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5. Given are the defining features of living being

A. growth

B. ability to make sound

C. reproduction

D. response to external stimuli

Answer: C



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6. The statement "Nothing lives for ever, yet life continues" illustrate the role of

A. Embryogenesis

B. Morphogenesis

C. Replication

D. Reproduction

Answer: B



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7. Correct sequence of levels of organisation is

A. atoms → molecules → cell → tissue
→ individual → ecosystem →
biosphere

B. atoms → molecules cells → tissue →
organs → individuals → ecosystem →
biosphere

C. atoms → molecules → cells → tissue
→ organs → individual → population
→ ec- osystem → biosphere

D. atom → molecule → cells → tissue
→ organs → and individuals →
populati on → community →
ecosystem → biosphere

Answer: D



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8. The most important characteristic of living organisms is

A. multiplication

B. movements

C. growth

D. reproduction

Answer: D



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9. The most important feature of all the living systems from the view point of their continuity is their capacity to

- A. utilize solar energy for metabolic activities
- B. produce gametes
- C. replicate the genetic information
- D. utilize oxygen to generate energy

Answer: C



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10. Most of animals at present obtain their free energy from

A. reduction of organic molecules

B. oxidation of organic molecules

C. light through photosynthesis

D. electricity and coal

Answer: B



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11. Which of the following is a Natatorial adaptation

- A. presence of adhesive discs
- B. presence of feathers on body
- C. strong shoulders
- D. streamlined body

Answer: D



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12. Which one is concerned with the temporary adaptation

A. phytomelanin

B. melanin

C. tannin

D. anthocyanin

Answer: B



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13. An example of long term adaptation is

A. hibernation

B. melanism

C. aestivation

D. spines of cactus

Answer: D



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14. Volant adaptation is for

A. swimming

B. flying

C. climbing

D. running

Answer: B



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15. Match column I with column II

Column I

- (a) Long term adaptation
- (b) Closed system
- (c) Homeothermal
- (d) Dead cells

Column II

- (i) Universe
- (ii) Man
- (iii) Cork
- (iv) Duck swimming

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

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

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

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

Answer: D



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16. Living organisms share the following features except that they

A. are formed of protoplasm

B. can prepare food

C. respire

D. reproduce

Answer: B



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17. Subcellular level of body organisation is

A. protozoans

B. porifers

C. prokaryotes

D. non living parts

Answer: A



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18. Which of the following forms the Highest level of organisation?

A. organ

B. cell

C. tissue

D. organ system

Answer: D



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19. Study of ageing is called

A. cosmology

B. teratology

C. gerontology

D. senescence

Answer: D



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20. A fish thrives better in an aquarium if green plants are growing in it. This is because

- A. they can eat plants for their survival
- B. they like green surroundings
- C. they get more oxygen
- D. they inhale CO_2 released by plants

Answer: C



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21. Which of the following parasites is nonliving outside the cell of a living organism and becomes living on entering it ?

- A. Bacteria
- B. Bacteriophage
- C. Plasmodium
- D. None of these

Answer: B



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22. What is homeostasis?

A. a tendency to change with change in environment

B. tendency to resist internal changes

C. disturbance in regulatory controls

D. plant and animal extracts used in homeopathy

Answer: B



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23. Which of the following cells in plant show toti- potency

A. Xylem vessels

B. Sieve tube

C. Meristem

D. Cork cells

Answer: C



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24. Cells regulate their activity through

A. flow of material

B. flow of energy

C. flow or information

D. flow of both energy and information

Answer: D



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25. Which one is example of homeostasis ?

- A. Osmoregulation in aquatic animals
- B. Increased heart beat at running
- C. Sweating during exercises and regulation of temperature
- D. All the above

Answer: D



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26. Adaptations shown by birds are

A. shape of beaks

B. type of claws and pneumatic bones

C. modification of fore limbs into wings

D. all of the above

Answer: D



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27. Adaptations significant for the evolution of species and reason of diversity are

A. short term and heritable

B. long term and heritable

C. long term and nonheritable

D. short term and non heritable

Answer: B



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28. Heterophylly is a long term adaptation in leaves of

A. free floating hydrophytes

B. submerged hydrophytes

C. rooted and floating hydrophytes

D. none of the above

Answer: C



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29. Kangaroo shows long term adaptation by using its tail as

A. 3rd limb

B. 5th limb

C. no use of tail

D. to protect its young offspring

Answer: B



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30. A wheat crop is ripening in the field. This shows

A. transfer of energy

B. transformation of energy

C. entropy

D. none of the above

Answer: A



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31. A long term adaptation of having both dissected and undissected leaves occur in anaquatic plant which is

A. Limnophila

B. Sagittaria

C. Eichhornia

D. Azolla

Answer: A



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32. A closed system is that which

A. does not show change in entropy

B. exports energy

C. does not exchange materials with
environment

D. exchange materials with environment

Answer: C



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33. What represents the steady state

- A. Intake of food materials, oxygen and water
- B. Elimination of waste materials and energy
- C. Intake of materials, energy and elimination of waste products including energy
- D. None of the above

Answer: C



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34. What is correct about energy transfer and energy transformation in living cells ?

A. Both occur continuously

B. Both occur discontinuously

C. First energy transfer and then energy transformation

D. First energy transformation and then energy transfer

Answer: A



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35. Thanatology is the science that deals with

A. death in all its aspects

B. solving paternity of child

C. identification of life

D. detection of lie

Answer: A



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36. The animals which do not have a steady body temperature are

A. poikilotherms

B. eutherians

C. stenothermals

D. homeotherms

Answer: A



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37. The reaction involving breaking of complex compounds into simpler ones is called

- A. anabolism
- B. homeostasis
- C. metabolism
- D. catabolism

Answer: D



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38. Most of the homeostatic mechanisms operate through feed back mechanism. The best example is illustrated by

A. hormones

B. enzymes

C. vitamins

D. ribozymes

Answer: A



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39. Homoeostasis refers to

- A. positive and negative feed back
- B. positive feed back
- C. negative feed back
- D. there is no feed back

Answer: A





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40. The total heat content/potential energy of a system is called

- A. enthalpy
- B. free energy
- C. activation energy
- D. entropy

Answer: A



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41. The first Indian awarded World Food Prize in 1987

A. Barwale

B. Anna Hazare

C. Sunderlal Bahuguna

D. MS Swaminathan

Answer: D



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42. What is the study of birds called as

A. Mycology

B. Ornithology

C. Osteology

D. Herpetology

Answer: C



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43. Choose the correct matching regarding an institution and its location

A. National Institute of virology : Pune

B. Central Drug Res. Institute : Kasauli

C. National Institute of Nutrition : Mumbai

D. National Instt. of Communicable Dis- eases
: Lucknow

Answer: A



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44. The scientist Norman Borlaugh, a plant breeder won the Nobel Prize in the field of peace for

A. green revolution

B. blue revolution

C. yellow revolution

D. white revolution

Answer: A



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45. Molecular biology is connected with study of

A. structure and function of polymers of life

B. all aspects of microbes

C. the chemical behaviour of organisms

D. the process by which molecules organised
into primitive form of life

Answer: A



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46. Bioinformatics is _concerned with the application of

A. engineering techniques in biological studies

B. chemistry in biological phenomenon

C. physics in knowing life processes

D. information science in analysing biological data

Answer: D



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47. Programmed termed as cell death is scientifically

A. autotomy

B. cell lysis

C. apoptosis

D. none of these

Answer: C



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

A. reproduction

B. growth and movement

C. responsiveness to touch

D. interaction with the environment and progressive evolution

Answer: D



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49. The basic unit of classification is

A. species

B. genus

C. family

D. phylum

Answer: A



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50. The framework system of classification in which various taxonomic categories are arranged in order or logical sequence is called.

A. systematics

B. classification

C. hierarchy

D. taxon

Answer: C



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51. The recent branch of taxonomy is

- A. karyotaxonomy (based on structure/
number and banding of chromosomes)
- B. cytotaxonomy (based on cytoplasmic
structures)
- C. evolution of species
- D. phylogeny

Answer: A



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52. Scala naturae (ladder of nature) was first theory in Biology in which all things were placed in a hierarchy. It was given by

- A. Haeckel
- B. Aristotle
- C. Leeuwenhoek
- D. Cuvier

Answer: B



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53. Reason of diversity in living being is

A. mutation

B. long term evolutionary changes

C. short term evolutionary changes

D. gradual changes

Answer: B



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54. The practical purpose of classification of living organisms is to

A. facilitate identification of unknown organisms

B. explain the origin of living organisms.

C. trace the evolution of living organisms

D. name the living organisms

Answer: A



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55. In early times, which types of plants were classified ?

A. medicinal

B. economical

C. aesthetic value

D. ecological value

Answer: A



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56. The term taxonomy was coined by

A. de Candolle

B. Linnaeus

C. John Ray

D. Bauhin

Answer: A



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57. The term taxonomy in general refers to

- A. classification of organisms
- B. identification of organisms
- C. nomenclature of organisms
- D. all of the above

Answer: D



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58. Who was first to classify plants and also wrote maximum on plants ?

A. Theophrastus

B. Linnaeus

C. Eichler

D. Lamarck

Answer: A



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59. The basic/smallest unit of classification is

A. Species

B. Taxon

C. Category

D. Subspecies

Answer: A



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60. Linnaeus recognised how many plants in his book 'Species Plantarum' (1753) ?

A. 5900 species

B. 4200 species

C. 1.7 million

D. 5 lac

Answer: A



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61. Taxonomy without phylogeny is similar to bones without flesh is the statement of

A. Oswald Tippo

B. Takhtajan

C. Hutchison

D. Bentham and Hooker

Answer: B



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62. Term Species, Division and Phylum were coined by

A. Species, by John Ray, Division by Eichler and Phylum by Cuvier.

B. Species by Cuvier, Division by Eichler and Phylum by Ray

C. Species by Ray and Phylum and Division by

Haeckel

D. Species and Division by Ray and Phylum by

Linnaeus

Answer: A



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63. Total species living today are of those living in the past

A. $\frac{1}{10}$ th

B. $\frac{1}{20}$ th

C. 10 times

D. 500 times

Answer: A



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64. Choose the correct sequence of taxonomic categories in Linnaean Hierarchy

A. Phylum - Class - Family - Tribe - Order -

Genus - Species

B. Division - Class - Order- Family-Tribe - Genus
- Species

C. Order - Class - Tribe - Division - Family -
Genus - Species

D. Phylum - Class - Tribe - Order - Family -
Genus - Species

Answer: B



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65. Taxon is

A. short term for taxonomy

B. a group of species

C. a classificatory (taxonomic) unit of any rank

D. a compendium of international rules of
nomenclature

Answer: C



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66. Category is

- A. a rank in hierarchy
- B. any grouping of living objects
- C. a term used interchangeable with taxon
- D. a taxonomic grouping

Answer: A



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67. Intermediate category is

- A. category in addition to obligate categories

B. subphylum

C. sub species

D. all of the above.

Answer: D



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68. Taxon and category differ in

A. Taxon is recognised and assigned while category is abstract.

B. Taxon is a group of real organisms while category is a rank or level in a hierarchy

C. Tiger or Algae is Taxon and species or division is category

D. All of the above

Answer: D



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

A. 7

B. 5

C. 3

D. 8

Answer: A



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70. Mark the odd one in the following.

A. Family

B. Cohort

C. Taxon

D. Species

Answer: C



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

A. Species

B. Genus

C. Order

D. Population

Answer: C



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72. Two genetically related species having distinct non overlapping geographical area are

A. Allopatric species

B. Sympatric species

C. Taxonomic species

D. Biological species

Answer: A



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73. Two species having same overlapping geographical area but different characters is

A. allopatric

B. sympatric

C. morphospecies

D. sibling species

Answer: B



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74. What are Mule, Tigon, Liger, Hinny ?

A. Species

B. Sub species

C. Hybrids

D. Categories

Answer: C



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75. When the generic name is repeated in specific name of a plant, it is called

- A. Synonym
- B. Autonym
- C. Tautonym
- D. Holotype

Answer: C



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76. According to binomial nomenclature, which one is incorrect ?

A. Tautonyms

B. Synonyms

C. Autonyms

D. Bionyms

Answer: A



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77. Holotype is a

- A. typical specimen designated by author for nomenclature and publication
- B. incomplete specimen
- C. unpreserve specimen
- D. specimen from other locality

Answer: A



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

- A. two names, one Latin and other common
- B. two names, one scientific and other vernacular
- C. one scientific name, given by two scientists

D. one scientific/biological name with two words- a genus and a species

Answer: D



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79. Binomial epithet in binomial nomenclature is

A. Genus + Species

B. Genus

C. Genus + Species + Author name

D. Genus + Species + Family

Answer: C



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80. The third name in trinomial nomenclature is

A. variety

B. subspecies

C. mutant

D. cultivar

Answer: B



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81. The founder of taxonomy is Aristotle. The father of modern Taxonomy who wrote Species Plantarum and provided a basis for classification of plants, is

A. de Candolle

B. Linnaeus

C. Bauhin

D. Turner

Answer: B



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82. Linnaeus, is famous for

- A. coining the term systematics
- B. introducing binomial nomenclature
- C. giving natural system of classification
- D. all of these

Answer: B



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83. Duplicate of holotype from same collection of same locality, date and same branch of plant is called

A. syntype

B. paratype

C. neotype

D. isotype

Answer: D



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84. Which of the following is a category ?

A. Order

B. Class

C. Genus

D. All of these

Answer: D





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85. An animal with same generic, specific and subspecific name is

A. Man

B. Rat

C. Snake

D. Gorilla

Answer: D



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86. In a scientific name, the name of author is printed in

A. Italics

B. Bold (Antic)

C. Roman

D. Capital letters

Answer: C



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87. The term animal species was coined and defined by

A. Darwin

B. John Ray

C. Huxley

D. Linnaeus

Answer: B



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88. If a biologist is to nomenclature a similar species, he will study

A. syntype

B. isotype

C. Neotype

D. paratype

Answer: B



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89. Neotype is

A. Nomenclatural type from original material

B. Nomenclatural type when original material is missing

C. One of the two or more specimens cited by author

D. New species discovered by a worker

Answer: B



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90. Genetic species concept was given by

A. Lotsy

B. Lamarck

C. Linnaeus

D. Huxley

Answer: A



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91. Which set of 'species' names belong to same genus?

A. histolytica and coli

B. gingivalis and proteus

C. proteus and coli

D. vivax and coli

Answer: A



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92. True species are

- A. interbreeding
- B. sharing the same niche
- C. feeding on same food
- D. reproductively isolated

Answer: D



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93. Breeding is possible between two member of

:-

A. Order

B. family

C. genus

D. species

Answer: C



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94. Nicotiana is

A. Qenus

B. species

C. variety

D. all of these

Answer: A



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95. Sequence of which of the following is used to know the phylogeny ?

A. mRNA

B. rRNA

C. tRNA

D. DNA

Answer: D



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96. In which book, binomial nomenclature was issued by Linnaeus

- A. Historia Naturalle
- B. Systema Naturae
- C. Historia Plantarum
- D. Species Plantarum

Answer: D



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97. Phenetic classification of organisms is based on

A. dendograms based on DNA characteristics

B. sexual characteristics

C. the ancestral lineage of existing organisms

D. observable characteristics of existing organisms

Answer: D



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98. Statistical methods used in classification

A. numerical

B. adansonian

C. phenetic

D. all the above

Answer: D



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99. First time written in Binomial nomenclature was

- A. Greek
- B. English
- C. Latin
- D. Italian

Answer: C



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100. The U.S. National Herbarium is situated in

A. Los Angeles

B. Hollywood

C. Washington

D. California

Answer: C



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101. The headquarter of BSI (Botanical Survey of India) is at

- A. Howrah, (Kolkata)
- B. New Delhi
- C. NBRI Lucknow (U.P)
- D. FRI Dehradun (Utranchal)

Answer: A



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102. Royal botanical garden is located at

A. Kew (England)

B. Paris

C. Washington

D. Howrah

Answer: A



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103. ICBN stands for

A. International classification of biological nomenclature

B. International code of biological nomenclature

C. International code of botanical nomenclature

D. International classification of biological naming

Answer: C



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104. The places where collection of dried, pressed plant specimens mounted on paper or placed in liquid preservative are kept systematically

- A. Herbaria
- B. Museum
- C. Botanical garden
- D. Zoo

Answer: A



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105. What is a botanical garden ?

- A. It is essentially a collection of living plants maintained for both pure and applied studies
- B. It is essentially a collection of plants only
- C. It is essentially the collection of rare and fossil plants
- D. It is for research work

Answer: A



106. In a plant herbarium, mostly to arrange plants, we make use of

- A. Hutchinsoon system of classification
- B. Bentham and Hookers system
- C. Linnaeus system of classification
- D. Haeckel system of classification

Answer: B



107. Kew (England) is well known for largest of the world

- A. Plant herbarium
- B. botanical laboratory
- C. botanical garden
- D. botanical park

Answer: A



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108. National Museum of Natural History loicated
at

A. Paris

B. Delhi

C. Jaipur

D. Mexico

Answer: B



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109. Flora of Delhi was compiled by

A. P Maheshwari

B. Roxburgh

C. JK Maheshwari

D. Father H Santapau

Answer: C



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110. Natural History museum is situated in

A. London

B. Washington

C. Paris

D. Delhi

Answer: A



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111. Largest herbaria of the Asia is at

A. Kew

B. Sibpur

C. Chennai

D. Trombay

Answer: B



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112. A national herbarium is that which contains plants of

A. a region

B. a country

C. a locality

D. world

Answer: D



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113. Who developed the "key" for identification of animals

A. John Ray

B. Goethe

C. Cuvier

D. Theophrastus

Answer: A



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114. The main objective of zoological park is

- A. captive breeding programme of animals
- B. providing natural habitats to animals
- C. in genetic engineering programme
- D. all the statements are correct

Answer: D



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115. BOTANICAL GARDENS

- A. beautiful area for recreation
- B. reservoir for tropical plants
- C. ex situ conservation of germplasm
- D. natural habitat for wild life

Answer: C





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116. Three phases of taxonomy, alpha, beta and omega were recognised by

A. de candolle

B. Julian Huxley

C. Takhatajan

D. Turril

Answer: D



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117. The institute which encourage publication of local flora in India is

A. NBRI

B. FRI

C. BSI

D. IARI

Answer: C



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118. Central National Herbarium is situated at

A. Mumbai

B. Chennai

C. Kolkata

D. Bangalore

Answer: C



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119. Which of the following taxonomic ranks contain organism most similar to one another?

A. Genus

B. Species

C. Family

D. Phylum

Answer: B



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120. National Botanical Research Institute (NBRI)

is located at:

A. Lucknow

B. Mumbai

C. Kolkata

D. Chennai

Answer: A



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121. Systema naturae was written by

A. Linnaeus

B. Aristotle

C. Darwin

D. de Candolle

Answer: A



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122. Who among the following is the father of botany?

A. Aristotle

B. Carolous Linnaeus

C. Robert Hooke

D. Theophrastus

Answer: D



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123. 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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124. Match the items given in Column I with those in Column II and select the correct option given below

| 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 |

| | |
|---------------|--------------------------------------------------------------------------------------------------------------------------|
| (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. (1) $a \quad b \quad c \quad d$
 $iii \quad iv \quad i \quad ii$
- B. (2) $a \quad b \quad c \quad d$
 $ii \quad iv \quad iii \quad i$
- C. (3) $a \quad b \quad c \quad d$
 $iii \quad ii \quad i \quad iv$
- D. (4) $a \quad b \quad c \quad d$
 $i \quad iv \quad iii \quad ii$

Answer: A



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