

PLANT TAXONOMY

- Plant taxonomy is a subject that deals with:**
 - Naming of plants
 - Identification, nomenclature and classification of plants
 - Identification and nomenclature of plants
 - Identification and classification of plants
- Identification deals with:**
 - Determination of a taxon as being identified with or similar to another already known element
 - Classification
 - Nomenclature
 - All of the above
- Carolus Linnaeus system of classification is:**
 - Asexual system
 - Morphological system
 - Sexual system
 - Biochemical and anatomical system
- He was a student of Aristotle and is known as the father of Botany. He was the author of *Historia plantarum*. He classified plants into trees, shrubs, under shrubs and herbs and also recognized annual, biennial and perennial duration of plant life cycle.**
 - Jerome Bock (1498-1554)
 - Albertus Magnus (1193-1280)
 - Andrea Caesalpino (1519-1603)
 - Theophrastus (370-285 B.C.)
- Who had recognized monocotyledons and dicotyledons as separate plant forms?**
 - Otto Brunfels (1464-1534)
 - Carl Linne
 - Charles Darwin
 - Albertus Magnus (1193-1280)
- Historia plantarum universalis* (1605) in three volumes deals with 5000 plants and was published posthumously by his son-in-law Cherler who is:**
 - John Ray (1628-1705)
 - Joseph Pittonde Tournefort
 - A.P. de Candolle
 - Johann Bauhin (1541-1631)
- Methodus plantarum* (1800 sfs) was published by:**
 - Mario Malpighi
 - Grew
 - Anton van Leewenhoek
 - John Grey
- Changes in environment can cause changes in the structure of organisms or evolution of acquired characters. This was proposed by a French biologist and plant taxonomist.**
 - Michael Adanson
 - Jean B.A.P.M. de Lamarck
 - De Jussieu
 - August Wilhelm Eichler (1839-1887)
- Who is known as the father of binomial nomenclature?**
 - Bentham and Hooker
 - Sir Charles Darwin
 - Engler and Prantl
 - Carolus Linnaeus
- Some of the famous publications of Carolus Linnaeus, the father of binomial nomenclature, are:**
 - Flora Lapponica, General Plantarum, Hortus Cliffortianus and Species Plantarum
 - Flora Francoise
 - General Plantarum
 - Die naturlichen Pflanzen-familien (1887-1899)
- In binominal nomenclature the first epithet is the:**
 - Epithet for the family of the plant and the second is for the order of the plant
 - Epithet for the genus of the plant and the second is for the species of the plant, third if any is for variety
 - First is for the species and the second is for the genus
 - First whether the plant is a monocotyledonous and the second is for the species of the plant
- This famous plant taxonomist was in the Royal Botanic Garden Kew, England. His publication of 1926 and 1934 was "The families of flowering plants". His method of classification has closer affinities with that of Bentham and Hooker.**
 - Alfred Barton Rendle
 - Karl Christian Mez
 - Hans Hallier
 - John Hutchinson
- Who coined the term 'species'?**
 - John Ray
 - Oswald Tippo
 - Carolus Linnaeus
 - C. Bessey
- Who was the famous embryologist who said that 'Ontogeny repeats phylogeny'?**
 - Lamarck
 - Von Baer
 - Louise Pasteus
 - Sir Charles Darwin
- Phylogeny is the:**
 - Life cycle of a species
 - Evolutionary history of a taxon
 - Ontogeny of a plant/animal
 - All of the above
- Which group of biologists/scientists were not plant taxonomists?**
 - Darwin, Cuvier, Steward
 - Bessey, Rendel, Ray, Gray, Hallier
 - Mez, Hutchinson, Linnaeus, Wettstein
 - Engler, deCandolle, Jisseau, Wettstein
- Cytology and cytotaxonomy are studies that until now have remained valuable in plant taxonomy since these can be useful:**
 - In establishing families of plants
 - In the phyletic resolution of taxa below the level of genus
 - In separating monocots from dicots
 - In separating angiosperms from gymnosperms
- The world's most primitive angiospermic plant is:**
 - Ophioglossum
 - Ficus sp
 - Lotus
 - Amborella, a relative of water lily
- Critica Botanica, Fundamenta Botanica and Philosophia Botanica are the three works on plant taxonomy by:**
 - J.D Bentham and Hooker
 - Carolus Linnaeus
 - Engler and Prantle
 - Eichler
- Botanically a plant has to have:**
 - Two names such as first one for the genus and the second one for the species
 - Three names
 - Nomen nudum only
 - None of the above
- In numerical taxonomy:**
 - Classification is based on genetic similarity
 - Viewing the nucleotide sequences of rRNA and DNA
 - Phenetic similarity and taxonomy is viewed as an empirical science and a priori each character is taken as of equal weight
 - All of the above

ANSWERS

1. b	2. a	3. c	4. d	5. d	6. c	7. d	8. b
9. d	10. a	11. c	12. d	13. a	14. b	15. b	16. a
17. b	18. d	19. a	20. a	21. c			

Contributed by Mr Aurobindo Satpathy, Lecturer in Botany, Dasharathpur H.S. School, Jajpur, Odisha

THE PERIODIC TABLE

- How many elements in the Periodic Table are found naturally?
(a) 88 (b) 90
(c) 92 (d) 93
- Which of the following elements is found naturally?
(a) Technetium (Tc) (b) Ruthenium (Ru)
(c) Promethium (Pr) (d) Francium (Fr)
- Which of the following elements is not found naturally?
(a) Hafnium (Hf) (b) Rhenium (Re)
(c) Thallium (Tl) (d) Astatine (At)
- Which of the following elements is not among the ferrous metals?
(a) Iron (Fe) (b) Cobalt (Co)
(c) Nickel (Ni) (d) Copper (Cu)
- Which of the following elements is not among the coinage metals?
(a) Copper (Cu) (b) Silver (Ag)
(c) Gold (Au) (d) Platinum (Pt)
- Which of the following elements is not among the Platinum metals?
(a) Ruthenium (Ru) (b) Rhodium (Rh)
(c) Palladium (Pd) (d) Silver (Ag)
- Which of the following elements is a halogen?
(a) Boron (B) (b) Sodium (Na)
(c) Astatine (At) (d) Francium (Fr)
- The Group VIB or the Group 16 elements consisting of oxygen, sulphur, selenium and tellurium are called...
(a) Metalloids (b) Alkaloids
(c) Halogens (d) Chalcogens
- The meaning of the word 'Chalcogen' is...
(a) Meal forming (b) Ore forming
(c) Non-metal forming (d) Oxide forming
- Which of the following pair of elements are liquid in tropical countries but solid in arctic and polar countries?
(a) Cesium (Cs) and Gallium (Ga)
(b) Rubidium (Rb) and Strontium (Sr)
(c) Vanadium (V) and Niobium (Nb)
(d) Calcium (Ca) and Magnesium (Mg)
- Which group in the Periodic Table consists of the elements that are found in all the three states of matter (i.e., solid, liquid and gas) at normal room temperature?
(a) Alkali metals (Gr.1)
(b) Alkaline earth metals (Gr.2)
(c) Chalcogens (Gr.16)
(d) Halogens (Gr.17)
- How many gaseous elements are there in the Periodic Table?
(a) 10 (b) 11
(c) 12 (d) 13
- The atomic number of the latest element (2010) discovered in Russia is...
(a) 116 (b) 117
(c) 118 (d) 119
- What is the highest atomic number of the man made elements until now?
(a) 116 (b) 117
(c) 118 (d) 119
- Rutherfordium (Rf) has atomic number 104. What should be its IUPAC symbol?
(a) Unb (b) Unt
(c) Unq (d) Unp
- How many Noble gases are there in the 18th Group of the Periodic Table?
(a) 4 (b) 5
(c) 6 (d) 7
- Which of the following is the heaviest metal in the Periodic Table?
(a) Tungsten (W) (b) Rhenium (Re)
(c) Osmium (Os) (d) Iridium (Ir)
- What is the correct sequence of the different blocks in the Periodic Table from left to right?
(a) s, p, d, f (b) s, f, d, p
(c) s, p, f, d (d) s, f, p, d
- In 1965 who introduced the concept of Periodic Table by reporting the 'Law of Octave'?
(a) John A. R. Newlands
(b) Dmitri Mendeleev
(c) Julius Lothar Meyer
(d) Henry G. J. Moseley
- In 1913 the modern Periodic Table was introduced by...
(a) John Dalton
(b) Dmitri Mendeleev and Julius Lothar Meyer
(c) Henry G. J. Moseley and Ernest Rutherford
(d) William Lawrence Bragg

ANSWERS

- 1) a 2) b 3) d 4) d 5) d 6) d 7) c 8) d
9) b 10) a 11) d 12) b 13) b 14) c 15) c 16) c
17) c 18) b 19) a 20) c

Contributed by Sabdar Aman Chowdhury, Assistant Professor, Department of Chemistry, Bolpur College, Bolpur, Birbhum, West Bengal-731204; E-mail: sabdarac@hotmail.com, Address: "Senjuti", Digantapally, P.O.-Santiniketan, Dt.-Birbhum, West Bengal-731235.