7th Science Lesson 11 Questions in English

11] Basis of Classification

1. _____ number of species of living organisms have been identified and named till now

a) 8.7 billion
b) 8.7 million
c) 8.7 lakhs
d) 10 billion

Explanation

We see various plants and animals around us**. It is estimated that about 8.7 million species of living organisms** have been identified and named till now.

2. Which of the following statement is incorrect?

1) In order to know about the behaviour and relationship among organisms, that are known, biologists have classified them into two broad groups, plants and animals
2) Grouping of living organisms based on their common features is known as biological classification
    a) 1 alone
    b) 2 alone
    c) 1, 2
    d) None

Explanation

Many scientists believe that, only a small portion of the total species existing on earth has been identified. In order to know about the behaviour and relationship among organisms, that are known, biologists have classified them into **two broad groups, plants and animals**. Grouping of living organisms based on their common features is known as **biological classification**.

3. Classification of living organisms is based on_____

1) Characteristics
2) Similarities
3) Differences
    a) 1, 2
    b) 1, 3
    c) 2, 3
    d) All the above

Explanation

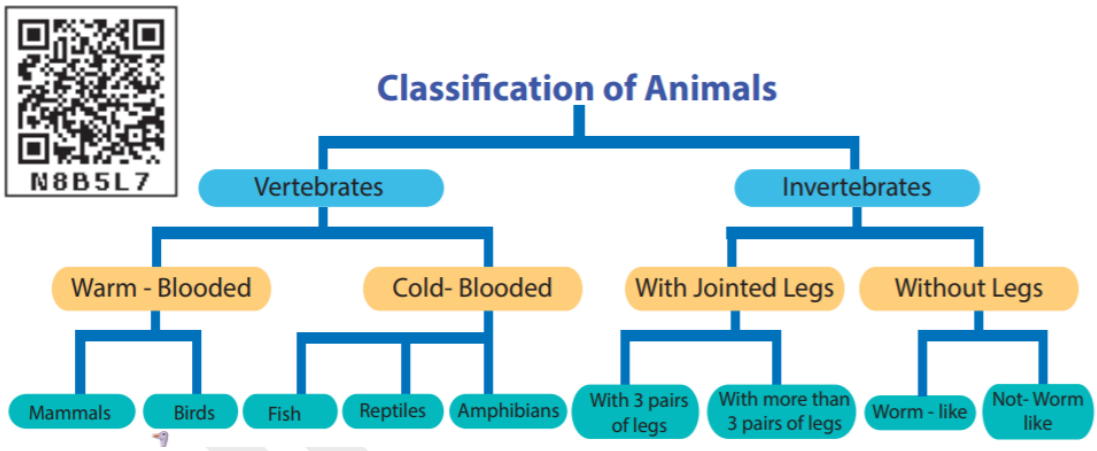
Living organisms are so large in number that they need to be classified into smaller groups. **Classification of living organisms** is made on the basis of their **characteristics, similarities and differences**.

4. Match the following:

I.	Warm – Blooded	1. Reptiles
II.	Cold- Blooded	2. Birds
III.	With Jointed Legs	3. Worm
IV.	Without Legs	4. With 3 pairs of leg

a) 4, 1, 2, 3
b) 1, 2, 4, 3
c) 2, 1, 4, 3
d) 2, 4, 1, 3

Explanation



5. Who classified animals into those 'with blood' and those 'without blood' before 2400 years?

a) Panini
b) Aristotle
c) Darwin
d) Pliny the elder

Explanation

Aristotle was a Greek philosopher and thinker who lived about 2400 years ago.

- He classified all organisms into either animals or plants
- Then he **classified into those 'with blood' and those 'without blood'**.
- Then the animals are classified into three groups based on their method of movement: walkers, flyers or swimmers.

6. Which of the following about necessity of classification is correct?

1) Classifying things makes it easy for us to know their similarities and differences
2) Classification helps us to understand, living and non – living things in better way
3) Things with similar characters are classified into same group
    a) 1, 2
    b) 1, 3
    c) 2, 3
    d) All the above

Explanation

Why do we classify things?

1. **Classifying things makes it easy for us to know their similarities and differences**.

2. **Things with similar characters are classified into same group**. These things are usually similar in at least one characteristic.

3. Things with different characteristics are classified into different groups. These things are usually different in at least one characteristic.

4. **Classification helps us to understand, living and non – living things** in better way. For example, we can classify a newly discovered organism, we would come to know, how it relates with other.

7. Who introduced the hierarchy of categories?

a) Ernest Heackel
b) Ernest Rutherford
c) Carl Linnaeus
d) R.H. Whitaker

Explanation

The system of arranging taxonomic categories in a descending order based on their relationships with other group of organisms is called **hierarchy of categories**". This system was **introduced by Linnaeus** and is called Linnaean hierarchy.

8. Which of the following is the basic unit of classification

a) Class
b) Order
c) Species
d) Genus

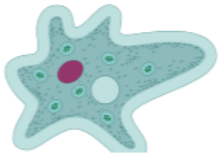
Explanation

There are seven main categories of hierarchies namely, Kingdom, Phylum, Class, Order, Family, Genus and Species. **Species** is the **basic unit of classification**

9. Which of the following are examples of Protozoa?

a) Amoeba
b) Euglena
c) Paramoecium
d) All the above

Explanation

Microscopic unicellular, pseudopodia, flagella and cilia for locomotion, reproduce by fission or conjugation.	Phylum **Protozoa** Eg. *Amoeba, Euglena* and *Paramoecium* 

10. Multicellular organisms with holes in the body are called as_____

a) Coelenterata
b) Aschelminthes
c) Nematoda
d) Porifera

Explanation

Multicellular organisms with holes in the body. Skeleton formed of spicules, asexual and sexual reproduction.	**Phylum Porifera** Eg. *Leucosolenia, Spongilla, Sycon.* 

11. Which of the following belong to phylum Coelenterata?

a) Ascaris lumbricoides
b) Hydra
c) Planaria
d) Nereis

Explanation

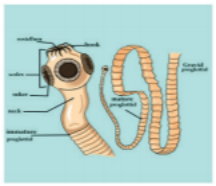
Multicellular organisms Diploblastic, sessile or free swimming, solitary or colonial, asexual and sexual reproduction	Phylum **Coelenterata** Eg. Hydra, Sea anemone, Jelly fish, Corals. 

12. Which of the following is/are hermaphrodite?

a) Planaria
b) Tapeworm

c) Blood fluke
d) All the above

Explanation

Acoelomates, parasites inside the body of animals and human beings, mostly hermaphrodite (bisexual).	Phylum **Platyhelminthes** Eg. *Planaria*, Liver fluke , Blood fluke, Tapeworm 

13. Which of the following phylum is also known as Nematoda?

a) Aschelminthes
b) Platyhelminthes
c) Annelida
d) Porifera

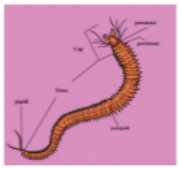
Explanation

Unsegmented body, mostly parasites in human beings and animals, causing diseases, asexual reproduction.	Phylum **Aschelminthes** or Nematoda Eg. *Ascaris lumbricoides* 

14. Which of the following are included in Phylum Annelida?

a) Earthworm
b) Tapeworm
c) Corals
d) Roundworm

Explanation

Triploblastic, segmented body, mostly hermaphrodite (bisexual and unisexual).	**Phylum Annelida** Eg. Earthworm, Nereis, Leech. 

15. Which of the following has thick chitinous cuticle?

1) Crab
2) Lizard
3) Scorpion
   a) 1, 2
   b) 1, 3

c) 2, 3
d) All the above

Explanation

Segmented body, thick chitinous cuticle forming an exoskeleton, paired and jointed legs, unisexual exhibits sexual dimorphism.	Phylum **Arthropoda** Eg. Crab, Prawn, Millipede, Insects, Scorpion, Spider 

16. Which of the following is not characteristics of Mollusca?

a) Soft bodied
b) Unsegmented
c) Hermaphrodite
d) Calcareous shell

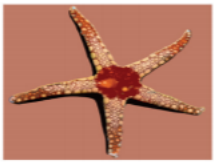
Explanation

Soft bodied, unsegmented, muscular head, foot and visceral mass, mantle, a calcareous shell, sexual reproduction.	Phylum **Mollusca** Eg. Cuttle fish, Snail, Octopus 

17. Exclusively marine, spines and spicules over the body are the features of_____

a) Arthropoda
b) Pisces
c) Amphibia
d) Echinodermata

Explanation

Exclusively marine, spines and spicules over the body, water vascular system, tube feet, for feeding, respiration and locomotion, sexual reproduction.	Phylum **Echinodermata** Eg. Starfish, Sea – Urchin, Brittle star, Sea cucumber and Sea- lily 

18. Which of the following belongs to Class Pisces?

1) Shark
2) Catla
3) Blue whale
4) Tilapia

a) **1, 2, 4**
b) 2, 3, 4
c) 1, 3, 4
d) All the above

Explanation

Aquatic, cold blooded vertebrates with boat shape body and jaws, locomotion by paired and median fins, sexual reproduction.	Class **Pisces** Shark, Catla, Mullet, Tilapia

19. Which of the following statement about Amphibia is correct?

1) Cold- blooded
2) Three pairs of limbs
3) Sexual reproduction

a) 1, 2
b) 1, 3
c) 2, 3
d) All the above

Explanation

Amphibious, cold- blooded, two pairs of limbs, sexual reproduction.	Class **Amphibia** Eg. Frog, Toad, Salamander, Caecilian

20. Which of the following does not belongs to Reptilia?

a) Garden lizard
b) Toad
c) Turtles
d) Tortoise

Explanation

Cold- blooded , lung breathing, scales over the body, pentadactyl limb, adapted for climbing, running and padding, oviparous.	Class **Reptilia** Garden lizard, House lizard, Turtles, Tortoise , Snakes, Crocodile

21. Which of the following statement about Aves is correct?

1) Powerful eyes
2) Viviparous
3) Spongy bones with air cavities
    a) 1, 2
    b) 2, 3
    c) 1, 3
    d) All the above

Explanation

Warm blooded, exoskeleton of feathers, flight adaptation, spongy bones with air cavities, powerful eyes, sexual reproduction, oviparous.	Class **Aves** Wader bird, Roller bird, Hoopoe bird, Parrot, Sparrow, Hen, Ostrich, Kiwi

22. Which of the following does not belongs Class Mammalia?

a) Kangaroo
b) Man
c) Snakes
d) Dog

Explanation

Terrestrial warm blooded, external ear or pinna, muscular diaphragm, non – nucleated RBC, heterodont and diphyodont dentition, viviparous give birth to young ones.	Class **Mammalia** Duck bill Platypus, Kangaroo, Cat, Dog, Tiger, Zeebra, Man

23. Which of the following statement is correct?

1) Based on dichotomy, plants also can be classified into two main groups
2) Flowering plants do not produce seeds
3) Non – flowering plants produce seeds
    a) 1, 2
    b) 1 alone
    c) 2, 3
    d) All the above

Explanation

Based on dichotomy, plants also can be classified into two main groups – **Flowering and Non – flowering. Non – flowering plants do not produce seeds and flowering plants produce seeds**.

24. Based on their nature of plant body, non – flowering plants are classified into_____ types

a) 4
b) 3
c) 2
d) 5

Explanation

Based on their nature of plant body, non – flowering plants are classified into **three types**: algae, mosses and ferns.

25. Based on what flowering plants are classified into gymnosperms and angiosperms?

a) Fruit colour
b) Fruit body
c) Flower colour
d) Plant structure

Explanation

Based on their fruit body, flowering plants are classified into two types: **gymnosperms and angiosperms**.

26. Which of the following statement about Algae is correct?

1) Plant is thallus, not well-differentiated into root, stem, and leaves
2) They are predominantly aquatic
3) They are unicellular or multicellular – filamentous
    a) 1, 2
    b) 1, 3
    c) 2, 3
    d) All the above

Explanation

Algae:

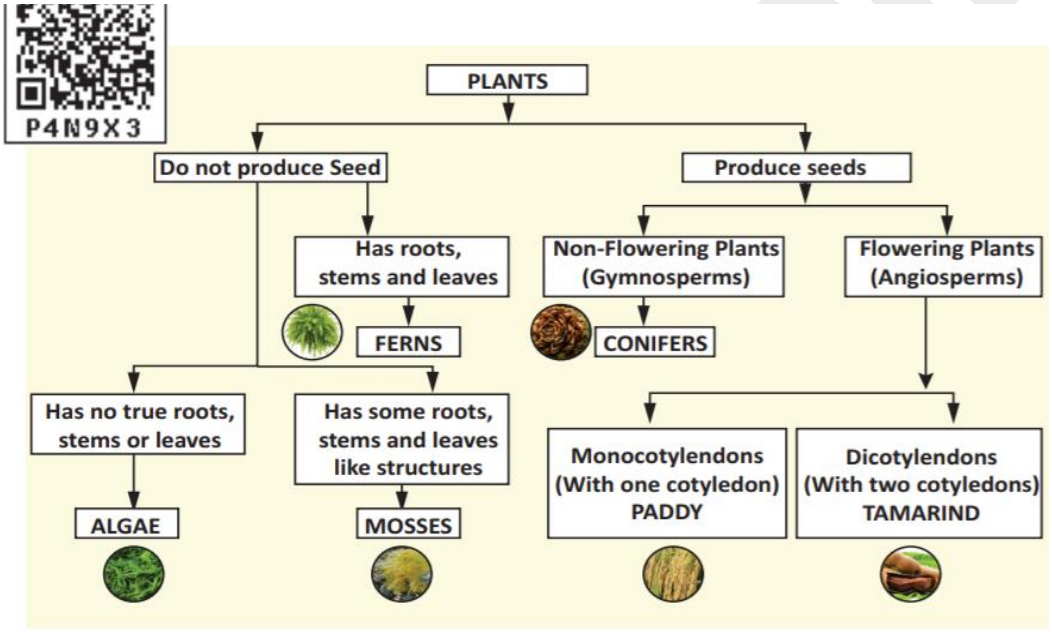
- Plant is thallus, not well-differentiated into root, stem, and leaves
- They are predominantly aquatic.
- They are unicellular or multicellular - filamentous. **Example - Chara**

27. Match the following:

I.	Has no true roots, stems or leaf	1. Conifers
II.	Has some roots, stems and leaves like structures	2. Tamarind
III.	Gymnosperms	3. Mosses
IV.	Angiosperms	4. Algae

a) **4, 3, 1, 2**
b) 3, 4, 1, 2
c) 3, 1, 2, 4
d) 3, 4, 2, 1

Explanation

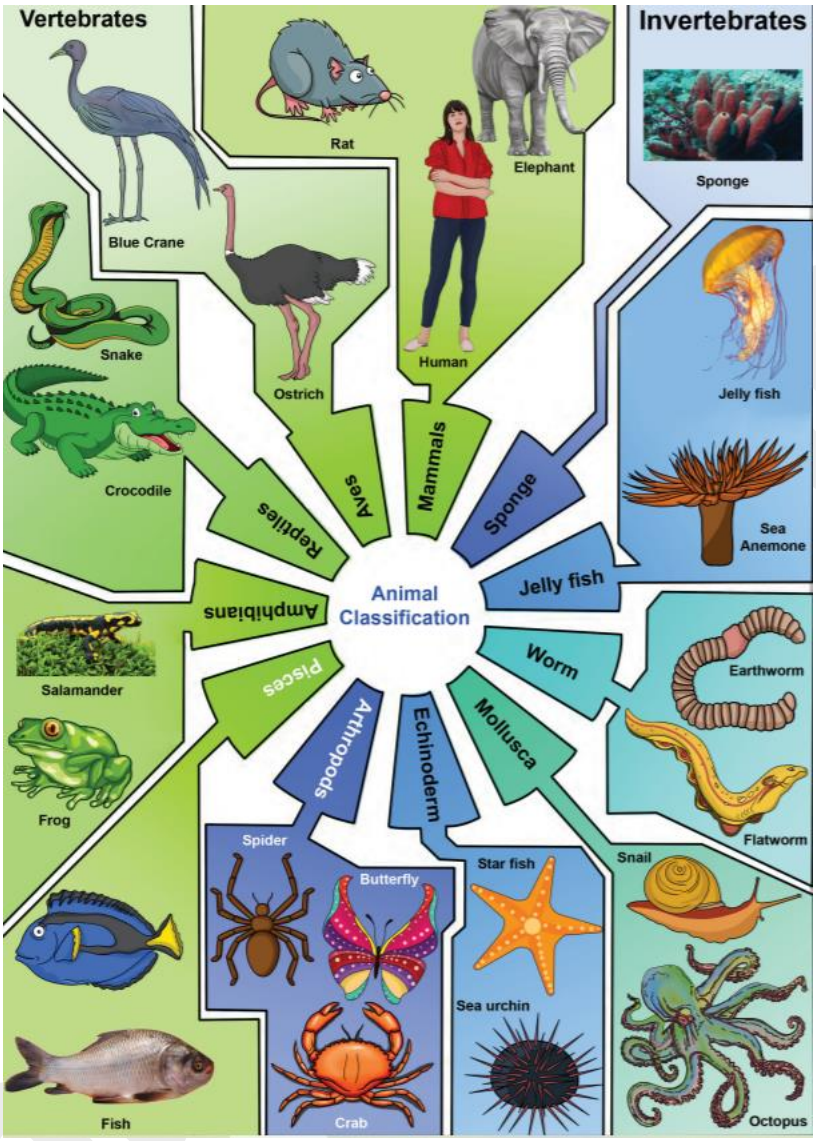


28. Match the following

I.	Reptiles	1. Octopus
II.	Worm	2. Flatworm
III.	Amphibians	3. Salamander
IV.	Mollusca	4. Crocodile

a) 2, 1, 3, 4
b) 4, 1, 2, 3
c) **4, 2, 3, 1**
d) 1, 2, 4, 3

Explanation



29. Which of the following statement about mosses is correct?

1) Plant body is differentiated into true root, stem and leaves.
2) They do not have any specialized vascular tissues for conduction of water and food
3) Funaria is an example of mosses
   a) 1, 2
   b) 1, 3
   c) 2, 3
   d) All the above

Explanation

Mosses

- **Plant body is not differentiated into true root, stem and leaves**.

- They are water living plants, needs moisture to complete its life cycle. Hence, they are referred to as amphibious plants
- They do not have any specialized vascular tissues for conduction of water and food. Examples: Funaria

30. Which of the following statement about ferns is correct?

1) Plant body is well-differentiated into root, stem, and leaves.
2) Leaves may be large or small
3) Basically, they are the first land plants which grows well in shady, moist, and cool places
    a) 1, 2
    b) 1, 3
    c) 2, 3
    d) All the above

Explanation

Ferns

- **Plant body is well-differentiated into root, stem, and leaves. Leaves may be large or small**.
- Specialized vascular tissues are found for the conduction of water and food.
- Basically, they are the **first land plants which grows well in shady, moist, and cool places**. (Examples: Adiantum)

31. Which of the following statement about Gymnosperms is correct?

1) Plants are perennial, woody, evergreen with true root, stem and leaves
2) They possess vascular tissues, xylem without vessels and phloem with companion cells.
3) Seeds are naked.
    a) 1, 2
    b) 1, 3
    c) 2, 3
    d) All the above

Explanation

Gymnosperms

- Plants are perennial, woody, evergreen with true root, stem and leaves.
- They possess vascular tissues, xylem without vessels and **phloem without companion cells**.
- Ovules are naked, without ovary. Hence, they do not produce fruits. Seed are naked. (Examples: Pinus, Cycas)

32. How many whorls does Angiosperms have?

a) 5
b) 2

c) 3
d) 4

Explanation

Angiosperms:

- Plant body is well differentiated into true root, stem, and leaves.
- Angiosperms **produce flower with four whorls** (calyx, corolla, androecium and gynoecium), hence known as flowering plants.

33. Which of the following statement is correct?

1) Angiosperms are the dominant plant forms of present da
2) Based on the number of cotyledons, angiosperms are broadly divided into two groups
    a) 1 alone
    b) 2 alone
    c) 1, 2
    d) None

Explanation

Angiosperms are the dominant plant forms of present day. Based on the number of cotyledons, angiosperms are broadly divided into two groups. a) monocotyledons b) dicotyledons.

34. Which of the following is matched incorrectly?

1) Monocot – Paddy
2) Dicot – Tamarind
    a) 1 alone
    b) 2 alone
    c) 1, 2
    d) None

Explanation

Plant seeds which have only one cotyledon are said to be monocots. Plant seeds which have two cotyledons are known as dicots. Example- **Paddy (monocot), tamarind (dicot)**

35. Who proposed the five-kingdom classification?

a) R. H. Whittaker
b) Darwin
c) Carl Linneaues
d) Martin

Explanation

The five-kingdom classification was proposed by R.H. Whittaker in 1969. Five kingdoms were formed on the basis of characteristics such as cell structure, mode of nutrition, source of nutrition and body organization.

36. Bacteria belongs to which kingdom?

a) **Monera**
b) Protista
c) Plantae
d) Fungi

Explanation

Kingdom Monera – Bacteria:

Most of the bacteria are heterotrophic, but some are autotrophs. Bacteria and Blue green algae are **examples for Monera**.

37. Assertion (A): All prokaryotes belong to the Kingdom Monera

Reason (R): Cells of prokaryotes do not have a nuclear membrane and any membrane bound

organelles.

a) Both (A) and (R) are correct, but (R) does not explain (A)
b) Both (A) and (R) are wrong
c) **Both (A) and (R) are correct and (R) explains (A)**
d) (A) is Correct and (R) is wrong

Explanation

All **prokaryotes belong to the Kingdom Monera**, which do not posses true nucleus. Cells of prokaryotes do not have a nuclear membrane and any membrane bound organelles.

38. Which of the following statement is correct?

1) The Kingdom Protista includes unicellular and a few simple multicellular eukaryotes.
2) Animals like protists are often called protozoans
3) They include amoeba and paramecium.
    a) 1, 2
    b) 1, 3
    c) 2, 3
    d) **All the above**

Explanation

The Kingdom Protista includes unicellular and a few simple multicellular eukaryotes. There are two main groups of protists. The plant like protists are photosynthetic and are commonly called algae. Algae include unicellular and multicellular types. Animals like protists are often called protozoans. They **include amoeba and paramecium**

39. Which of the following are included in Kingdom Fungi?

a) Molds
b) Mushrooms
c) Mildews
d) All the above

Explanation

Fungi are eukaryotic, and mostly are multicellular. They secrete enzymes to digest the food and absorb the food after digested by the enzymes. Fungi saprophytes as decomposers (decay –causing organisms) or as parasites. **Kingdom Fungi includes molds, mildews, mushrooms and yeast**.

40. Which of the following statement is correct?

1) Planatae (plants) are multicellular eukaryotes that carry out photosynthesis.
2) Kingdom Plantae includes ferns, cone bearing plants and flowering plants.
3) Plant cells do not have cell wall
   a) 1, 2
   b) 1, 3
   c) 2, 3
   d) All the above

Explanation

Planatae (plants) are multicellular eukaryotes that carry out photosynthesis. Reserve food materials are starch and lipids in the form of oil or fat. **Plant cells have cell wall** and specialized functions, such as photosynthesis, transport of materials and support. Kingdom Plantae includes ferns, cone bearing plants and flowering plants.

41. Which of the following is matched correctly?

1) Vertebrates- Birds
2) Invertebrates – Flatworms
   a) 1 alone
   b) 2 alone
   c) 1, 2
   d) None

Explanation

Invertebrates like sponges, hydra, **flatworms,** round worms, insects, snails, starfishes. **Vertebrates** like Fish, amphibians, reptiles, **birds**, and mammals including human beings belong to the kingdom Animalia.

42. Which of the following statement about Animalia is correct?

1) Animalia (animals) are multicellular, eukaryotic and heterotrophic animals
2) Cells have cell wall
3) Most members of the animal kingdom can move from place to place
    a) 1, 2
    b) 1, 3
    c) 2, 3
    d) All the above

Explanation

Animalia (animals) are multicellular, eukaryotic and heterotrophic animals. **Cells have no cell wall**. Most members of the animal kingdom can move from place to place.

43. Which of the following about five Kingdom Classification is correct?

1) This system of classification is more scientific and natura
2) It is the most accepted system of modern classification as the different groups of organisms are placed phylogenetically
3) It indicates gradual evolution of complex organisms from simpler one
    a) 1, 2
    b) 1, 3
    c) 2, 3
    d) All the above

Explanation

Merits of five Kingdom Classification:

- This system of classification is more scientific and natural.
- This system of classification clearly indicates the cellular organization, mode of nutrition, and characters for early evolution of life.
- It is the most accepted system of modern classification as the different groups of organisms are placed phylogenetically. It indicates gradual evolution of complex organisms from simpler one.
- It indicates gradual evolution of complex organisms from simpler one.

44. Who implemented Binomial Nomenclature?

a) R. H. Whittaker
b) Carolus Linnaeas

c) Gaspard Bauhin
d) None

Explanation

Gaspard Bauhin in 1623, introduced naming of organisms with two names which is known as **Binomial nomenclature**, and it **was implemented by Carolus Linnaeas** in 1753. He is known as 'Father of Modern Taxonomy'.

45. Which of the following statement is correct?

1) Binomial nomenclature is a universal system of naming organisms.
2) First is the Genus name, second is the Species name.
3) Genus name begins with a capital letter and Species name begins with a small letter.
    a) 1, 2
    b) 1, 3
    c) 2, 3
    d) All the above

Explanation

Binomial nomenclature is a universal system of naming organisms. As per this system, each organism has two names – **the first is the Genus name and the second is the Species name**. Genus name begins with a capital letter and Species name begins with a small letter.

46. Match the following

I.	Human being	1. Rattus rattus
II.	Pigeon	2. Homo sapiens
III.	Onion	3. Allium sativum
IV.	Rat	4. Columba livia

a) 4, 1, 2, 3
b) 2, 4, 3, 1
c) 2, 1, 3 4
d) 2, 4, 1, 3

Explanation

Human being	*Homo sapiens*
Onion	*Allium sativum*
Rat	*Rattus rattus*
Pigeon	*Columba livia*
Tamarind	*Tamirindus indica*
Lime	*Citrus aurantifolia*

47. Match the following

I.	Coconut	1. Catla catla
II.	Fish	2. Cocos nucifera
III.	Ginger	3. Zingiber officinale
IV.	Date	4. Phoenix dactylifera

a) **2, 1, 3, 4**
b) 2, 3, 1, 4
c) 2, 1, 4, 3
d) 1, 4, 2, 3

Explanation

Neem Tree	*Azadirachta indica*
Frog	*Rana hexadactyla*
Coconut	*Cocos nucifera*
Paddy	*Oryza sativa*
Fish	*Catla catla*
Orange	*Citrus sinensis*
Ginger	*Zingiber officinale*
Papaya	*Carica papaya*
Date	*Phoenix dactylifera*