

**SAMPLE CONTENT**



**Absolute**

For all Medical Entrance Examinations held across India.

# **Biology** Vol - I

**NEET-UG**

4039 MCQs with Hints

## **Classification:**

Kingdom : Animalia  
Phylum : Chordata  
Class : Mammalia  
Genus : *Panthera*  
Species : *pardus*



**Target** Publications Pvt. Ltd.

For all Medical Entrance Examinations held across India.

# Absolute NEET – UG Biology Vol. I

## Salient Features

- Exhaustive coverage of MCQs subtopic wise.
- ‘4039’ MCQs including questions from various competitive exams.
- Includes solved MCQs from NEET-UG, MHT-CET and various entrance examinations from year 2015 to 2018.
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## PREFACE

Target's "Absolute Biology Vol – I" is compiled according to the notified syllabus for NEET-UG. The content of this book is framed after reviewing the format of NCERT textbook.

The sections of **Theory**, **Quick Review**, **MCQs** and **Topic Test** form the backbone of every chapter and ensure adequate revision.

The MCQs in each chapter are a mix of questions based on high order thinking, theory and multiple concepts. The level of difficulty of these questions is at par with that of various competitive examinations like CBSE, AIIMS, CPMT, AFMC, JIPMER, TS EAMCET (Med. and Engg.), BCECE, AP EAMCET (Med. and Engg.) and likes. Also to keep students updated, questions from most recent examinations such as AIPMT/NEET, MHT CET, KCET, GUJ CET, WB JEEM of years 2015, 2016, 2017 and 2018 are covered exclusively.

**Topic Test** has been provided at the end of each chapter to assess the level of preparation of the student on a competitive level.

We are confident that this book will cater to needs of students across a varied background and effectively assist them to achieve their goal. We welcome readers' comments and suggestions which will enable us to refine and enrich this book further.

Please write to us at: [mail@targetpublications.org](mailto:mail@targetpublications.org)

*All the best to all Aspirants!*

Yours faithfully,

Authors

Edition: Second

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# 01 The Living World

1.1 What is Living?

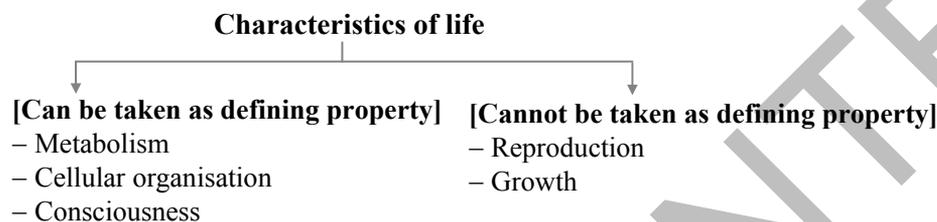
1.2 Diversity in the Living World

1.3 Taxonomic Categories

1.4 Taxonomical Aids

## 1.1 What is Living?

Life is a complex organisation of molecules that features through metabolism, growth, responsiveness and reproduction.



### ➤ **Metabolism:**

Metabolism is a process by which all living organisms assimilate energy to perform various life processes such as growth, reproduction, movement, etc.

Non-living object does not exhibit metabolism. However, metabolic reactions can be demonstrated in cell-free (in vitro) system.

### ➤ **Cellular organisation:**

All living organisms have some or the other cell organelles like nucleus, protoplasm, mesosome, capsule, etc.

### ➤ **Consciousness:**

All living organisms can sense and respond to internal and external stimuli.

### ➤ **Reproduction:**

Mules, worker bees, infertile human couples, etc are sterile and hence cannot reproduce. Thus, reproduction cannot be taken as defining characteristic of living organisms.

### ➤ **Growth:**

Non living things also grow due to accumulation of material on their surface (like mountain grows), hence growth cannot be considered as a living property.

## 1.2 Diversity in the Living World

### ➤ **Biodiversity:**

- i. Biodiversity encompasses all forms of life with variety and variability amongst them.
- ii. The numbers of species that are known and described range between 1.7-1.8 million.

### ➤ **Nomenclature:**

- i. The need to standardise the naming of living organisms is to make it unique.
- ii. Nomenclature provides a distinct and proper name to an organism. Thus, it becomes easy to recognise and differentiate a particular organism from others.

#### iii. **Standardisation of naming of living organisms:**

Scientific names are based on certain principles:

- a. For plants, provided by International Code for Botanical Nomenclature (ICBN)
- b. For animals, provided by International Code for Zoological Nomenclature (ICZN)



iv. **Binomial Nomenclature:**

a. It is the system of providing a name with two components, viz. - the **generic name** and the **specific epithet** (species name)

For e.g. Man: *Homo sapiens*

This naming system was given by Carolus Linnaeus.

b. **Universal rules of binomial nomenclature are as follows:**

1. Biological names are generally in Latin and written in italics (when printed) or underlined (when handwritten).
2. The first word is the genus name and the second is the specific epithet.
3. The genus name starts with a capital letter and the specific epithet is completely in small letters.
4. Also, the author's name appears after the specific epithet.  
For e.g. *Mangifera indica* Linn. (Linn indicates that this species was first described by Linnaeus)

➤ **Identification:**

Identification is finding the correct name and place of an organism in a system of classification with the help of identification key. It also includes comparing an organism with similarities and dissimilarities of already known organism.

➤ **Classification:**

It is the process by which organism is grouped into convenient categories based on some characters.

Two branches of classification: **Systematics and Taxonomy.**

i. **Systematics:**

- a. It is the study of relationships among different kinds of organisms and their diversities.
- b. Linnaeus used *Systema Nature* as the title of his publication.

ii. **Taxonomy:**

- a. It is the process of classification of all living organisms into different taxa based on their characteristics.
- b. Any organism is grouped into convenient categories based on some easily observable characteristics. The scientific term for these categories is **taxa**.
- c. Characterisation, identification, classification and nomenclature are the processes that are basic to taxonomy.

### 1.3 Taxonomic Categories

- i. Classification involves hierarchy of steps, a rank or a category.
- ii. **Taxonomic Category:** Overall taxonomic arrangement.
- iii. **Taxonomic Hierarchy:** All categories together constitute taxonomic hierarchy.
- iv. Groups represent a category → category further denotes a rank → each taxon (rank) represents a unit of classification
- v. An organism is placed into various categories by their characteristics.  
The common categories are (descending order):

**KINGDOM→PHYLUM→CLASS→ORDER→FAMILY→GENUS→SPECIES**

➤ **Species:**

It is a group of individual organisms with fundamental similarities. A genus may include one or more species.

e.g. *Solanum tuberosum* (Potato) and *Solanum melongena* (Brinjal). Here, *tuberosum* and *melongena* represent the specific epithets.

➤ **Genus:**

It is a group of related species, which shows fewer characters in common in comparison to species of other genera.

e.g. Lion (*Panthera leo*) and leopard (*Panthera pardus*) show many common features because they belong to same genus *Panthera* but they differ from genus *Felis* which includes cats.

➤ **Family:**

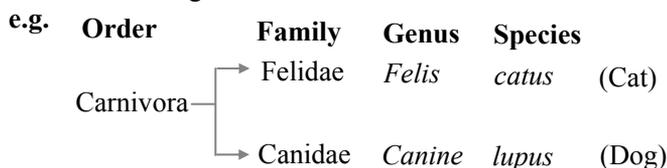
It is a group of related genera with lesser number of common characters in comparison to genus and species.

e.g.

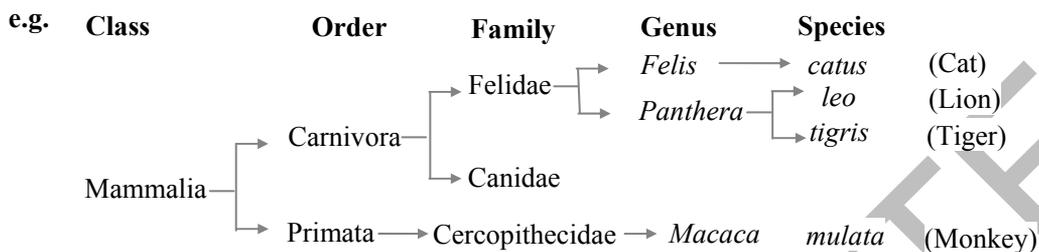
Family	Genus	Species	
Felidae	→ <i>Felis</i>	<i>catus</i>	(Cat)
	→ <i>Panthera</i>	<i>leo</i>	(Lion)

➤ **Order:**

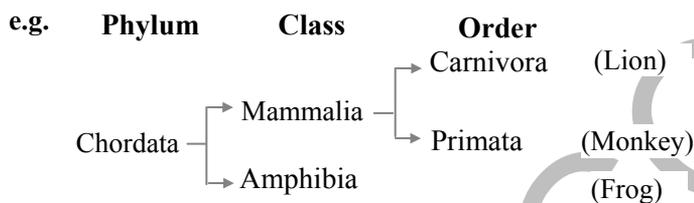
It is an assemblage of families which exhibit a few similar characters.

➤ **Class:**

It includes related orders.

➤ **Phylum:**

Organisms belonging to different classes having very few characteristics in common.

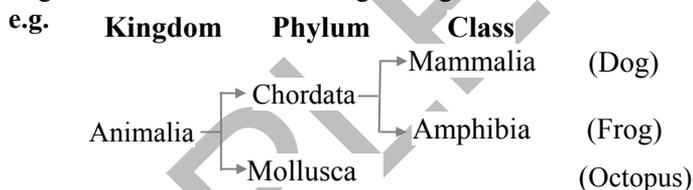
**Division:**

A division is a taxonomic level name often used in **plants** and **fungi** taxonomy; it is equivalent to **phylum**.

➤ **Kingdom:**

It is the highest category.

Organisms share a set of distinguishing common characteristics.

**1.4 Taxonomical Aids**

- Taxonomic studies of various species of plants, animals and other organisms are useful in agriculture, forestry, industry, and knowing our bio-resources and their diversities.
- Biologists have established certain procedures and techniques to store and preserve the information as well as the specimens.

Some of the taxonomic aids are:

**a. Herbarium:**

- Store house of plant specimens.
- Plants collected → dried → pressed → preserved on sheets → sheets are arranged according to universally accepted system of classification → store house/repository/herbarium

**b. Botanical Gardens:**

- Collections of living plants for reference.
- Some of the famous botanical gardens are: Kew (England), Indian Botanical Garden (Howrah-India), National Botanical Research Institute (Lucknow- India)

**c. Museums:**

Collection of preserved plant and animal specimens for study and reference.



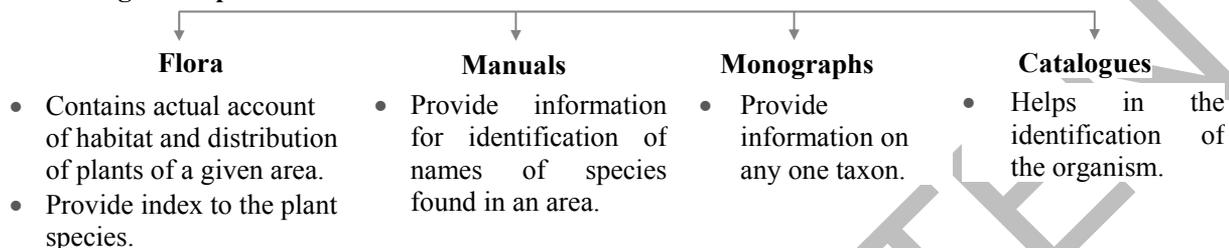
**d. Zoological Parks:**

Wild animals are kept in protected environments under human care.

**e. Key:**

1. It is used for identification of plants and animals based on the similarities and dissimilarities.
2. It is based on contrasting characters in a pair called **couplet**.
3. It is analytical in nature, because choice is made between two opposite options in which one is selected and other one is rejected.

**f. Recording Descriptions:**



NUTSHELL						
Kingdom	Phylum	Class	Order	Family	Genus	Species
Kings	Play	Chess	On	Fine	Glass	Sets
K	P	C	O	F	G	S

**Multiple Choice Questions**

**1.1 What is Living?**

1. All living organisms are linked to one another because **[NCERT Exemplar]**
  - (A) they have common genetic material of the same type
  - (B) they share common genetic material but to varying degrees
  - (C) all have common cellular organisation
  - (D) all of the above

2. Match the Column-I with Column-II and select the correct option:

	Column I		Column II
1.	Increase in number of cells	a.	Consciousness
2.	Chemical reactions	b.	Reproduction
3.	Response to stimuli	c.	Metabolism
4.	Budding	d.	Growth

- (A) 1-a, 2-b, 3-d, 4-c
- (B) 1-d, 2-c, 3-a, 4-b
- (C) 1-b, 2-c, 3-a, 4-d
- (D) 1-d, 2-b, 3-c, 4-a

3. Which of the following is a defining characteristic of living organisms? **[NCERT Exemplar]**

- (A) Growth
- (B) Ability to make sound
- (C) Reproduction
- (D) Response to external stimuli

4. Which one of the following is true?
  - (A) In plants and animals, cell division occurs continuously.
  - (B) In plants, cell division occurs up to a certain age whereas in animals, it occurs continuously.
  - (C) In plants cell division occurs continuously whereas in animals, it occurs only upto a certain age.
  - (D) In plants and animals, cell division occurs only upto a certain age.
5. Which of the following cannot reproduce?
  - (A) *Amoeba*
  - (B) Mule
  - (C) Fungi
  - (D) Queen bee
6. Which amongst the following multiply by fragmentation?
  - (A) *Planaria*
  - (B) *Amoeba*
  - (C) Bacteria
  - (D) Virus
7. **Assertion:** True regeneration can be observed in *Planaria*.  
**Reason:** A fragmented *Planaria*, regenerates the lost part of its body and develops into a new organism.
  - (A) Both assertion and reason are true and reason is the correct explanation of assertion.
  - (B) Both assertion and reason are true but reason is not the correct explanation of assertion.
  - (C) Assertion is true but reason is false.
  - (D) Both assertion and reason are false.



8. Regeneration as a method of asexual reproduction is observed in \_\_\_\_\_.

[MHT CET 2018]

- (A) *Ascaris* (B) *Planaria*  
(C) Prawn (D) *Salmonella*

9. Select the mismatched pair from the following.

- (A) Fungi – Asexual spores  
(B) Yeast – Budding  
(C) *Amoeba* – Binary fission  
(D) Protonema – True regeneration

## 1.2 Diversity in the Living World

10. The system of binomial nomenclature was given by

- (A) Ernst Mayr  
(B) John Ray  
(C) Adolf Mayer  
(D) Carolus Linnaeus

11. Who gave the nomenclature according to which humans are called *Homo sapiens*?

[BCECE 2015]

- (A) Darwin (B) Mendel  
(C) Aristotle (D) Linnaeus

12. Which one of the following is true for the given sentence?

For the plants, scientific names are provided by

- (A) International Code for Botanical Nomenclature  
(B) International Code for Biological Nomenclature  
(C) International Class for Botanical Nomenclature  
(D) International Class for Biological Nomenclature

13. Animal taxonomists have named the animals according to

- (A) Indian Code for Zoology Nomenclature  
(B) International Class for Zoology Nomenclature  
(C) International Classification for Zoological Nomenclature  
(D) International Code for Zoological Nomenclature

14. **Assertion:** As we explore different areas, new organisms are being identified.

**Reason:** Vernacular names are chosen for nomenclature of newly found organisms.

- (A) Both assertion and reason are true and reason is the correct explanation of assertion.  
(B) Both assertion and reason are true but reason is not the correct explanation of assertion.  
(C) Assertion is true but reason is false.  
(D) Both assertion and reason are false.

15. Nomenclature is governed by certain universal rules. Which one of the following is contrary to the rules of nomenclature? [NEET P-I 2016]

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

16. Opt for the appropriate way of writing biological name from below

- (A) *Mangifera Indica*  
(B) *Panthera leo*  
(C) *Solanum tuberosum*  
(D) *solanum nigrum*

17. The main purpose of classification is to

- (A) establish relationships  
(B) locate animals  
(C) study geography  
(D) study key to evolution

18. Need for a proper system of classification arises because

- (A) the organisms of the past cannot be studied without it.  
(B) classification helps in knowing the relationships among the different groups of organisms.  
(C) it is not possible to study every organism.  
(D) all of these

19. **Assertion:** The study of classification of organisms is called taxonomy.

**Reason:** Taxonomy and systematics have the same meaning.

- (A) Both assertion and reason are true and reason is the correct explanation of assertion.  
(B) Both assertion and reason are true but reason is not the correct explanation of assertion.  
(C) Assertion is true but reason is false.  
(D) Both assertion and reason are false.

20. Branch of science dealing with classification is

- (A) taxonomy (B) anatomy  
(C) morphology (D) biology

21. The term 'systematics' refers to

[NCERT Exemplar]

- (A) identification and study of organ systems.  
(B) identification and preservation of plants and animals.  
(C) diversity of different kinds of organisms and their relationship.  
(D) study of habitats of organisms and their classification.



22. Which scientist is known as the Darwin of the 20<sup>th</sup> Century?  
 (A) Carolus Linnaeus  
 (B) Lammarck  
 (C) Gregor Johann Mendel  
 (D) Ernst Mayr

**1.3 Taxonomic Categories**

23. The serial arrangement of taxon is known as  
 (A) Category (B) Classification  
 (C) Hierarchy (D) Taxonomy
24. In taxonomic hierarchy, various categories are arranged in  
 (A) descending order (B) ascending order  
 (C) no order (D) all of these
25. Which is the highest in the hierarchy of taxonomic category? **[BCECE 2015]**  
 (A) Genus (B) Family  
 (C) Order (D) Class
26. As we go from species to kingdom in a taxonomic hierarchy, the number of common characteristics **[NCERT Exemplar]**  
 (A) will decrease  
 (B) will increase  
 (C) remain same  
 (D) may increase or decrease
27. In a taxonomic hierarchy, the number of characters will increase as we go from **[KCET 2016]**  
 (A) Class to Order  
 (B) Species to Kingdom  
 (C) Genus to Species  
 (D) Kingdom to Species
28. A group of plants with similar traits of any rank is **[CBSE PMT 1990, 92, 96, 97; AFMC 1994; CPMT 1996; CET Chd. 2000; Pb. PMT 2002]**

- (A) species (B) genus  
 (C) order (D) taxon

29. Which is a taxon?  
**[CBSE PMT 1992; Pb. PMT 1998]**  
 (A) Genera (B) Family  
 (C) Class (D) None of these
30. Which of the following taxonomical ranks contain organisms, least similar to one another? **[DPMT 1999; Pb. PMT 2000]**  
 (A) Class (B) Genus  
 (C) Family (D) Species
31. Which of the following is not a taxon but category?  
 (A) Division (B) Dicotyledons  
 (C) Angiosperms (D) Polypetalae
32. In the system of classification, which one of the following is NOT a category? **[MHT CET 2018]**  
 (A) Kingdom (B) Series  
 (C) Angiospermae (D) Genus
33. The correct sequence of taxonomic hierarchy is **[KCET 2018]**  
 (A) Genus → Family → Class → Order → Phylum → Kingdom → Species  
 (B) Species → Genus → Family → Order → Class → Phylum → Kingdom  
 (C) Species → Family → Genus → Kingdom → Order → Class → Phylum  
 (D) Species → Genus → Family → Class → Order → Phylum → Kingdom
34. Genus represents **[NCERT Exemplar]**  
 (A) an individual plant or animal  
 (B) a collection of plants or animals  
 (C) group of closely related species of plants or animals  
 (D) none of these.

35.



Choose the correct classification of the given picture of the animal.

	Phylum	Class	Order	Family	Genus	Species
(A)	Chordata	Vertebrata	Primata	Felidae	<i>Panthera</i>	<i>leo</i>
(B)	Chordata	Mammalia	Carnivora	Felidae	<i>Panthera</i>	<i>leo</i>
(C)	Vertebrata	Mammalia	Carnivora	Canidae	<i>Canis</i>	<i>leo</i>
(D)	Vertebrata	Mammalia	Primata	Canidae	<i>Canis</i>	<i>leo</i>



36. Select the correct option to complete the given table.

Common name	Biological name	Phylum/ Division	Class	Order	Family	Genus
Man	<i>Homo sapiens</i>	Chordata	Mammalia	Primata	(i)	<i>Homo</i>
Housefly	<i>Musca domestica</i>	Arthropoda	Insecta	(ii)	Muscidae	<i>Musca</i>
Mango	<i>Mangifera indica</i>	Angiospermae	(iii)	Sapindales	Anacardiaceae	<i>Mangifera</i>
Wheat	<i>Triticum aestivum</i>	(iv)	Monocotyledonae	Poales	Poaceae	<i>Triticum</i>

	i.	ii.	iii.	iv.
(A)	Hominidae	Diptera	Dicotyledonae	Angiospermae
(B)	Hominidae	Dicotyledonae	Diptera	Angiospermae
(C)	Hominidae	Diptera	Angiospermae	Dicotyledonae
(D)	Hominidae	Dicotyledonae	Angiospermae	Diptera

37. Two organisms are from the same phylum, but different family. They may belong to the same  
 (A) Species (B) Order (C) Division (D) Genus
38. Identify the correct sequence of taxonomic hierarchical arrangement in ascending order of the following.  
 [EAMCET 2016]

- (A) Spermatophyta, Sapindales, Dicotyledons, Anacardiaceae, *Mangifera*  
 (B) *Mangifera*, Dicotyledons, Anacardiaceae, Spermatophyta, Sapindales  
 (C) *Mangifera*, Anacardiaceae, Sapindales, Dicotyledons, Spermatophyta  
 (D) Dicotyledons, Anacardiaceae, Sapindales, Spermatophyte, *Mangifera*

39. Match the following and choose the correct option. [NCERT Exemplar]

a.	Family	1.	<i>tuberosum</i>
b.	Kingdom	2.	polymoniales
c.	Order	3.	<i>Solanum</i>
d.	Species	4.	plantae
e.	Genus	5.	<i>Solanaceae</i>

- (A) a - 4, b - 3, c - 5, d - 2, e - 1  
 (B) a - 5, b - 4, c - 2, d - 1, e - 3  
 (C) a - 4, b - 5, c - 2, d - 1, e - 3  
 (D) a - 5, b - 3, c - 2, d - 1, e - 4

40. **Assertion:** Dogs and cats have some similarities.

**Reason:** They belong to the same family Felidae.

- (A) Both assertion and reason are true and reason is the correct explanation of assertion.  
 (B) Both assertion and reason are true but reason is not the correct explanation of assertion.  
 (C) Assertion is true but reason is false.  
 (D) Both assertion and reason are false.

41. Select the incorrect set from the following:

- (A) Polymoniales – Convolvulaceae, Solanaceae.  
 (B) Primata – gorilla, gibbon  
 (C) Felidae – cat, dog  
 (D) *Panthera* – leopard, tiger

42. Which one is the mismatched pair?

- (A) Wheat – *Triticum aestivum*  
 (B) Housefly – *Musca domestica*  
 (C) Mango – *Azadirachta indica*  
 (D) Lion – *Panthera leo*

43. Match Column-I with Column-II for housefly classification and select the correct option using the codes given below:

	Column-I		Column-II
a.	Family	i.	Diptera
b.	Order	ii.	Arthropoda
c.	Class	iii.	Muscidae
d.	Phylum	iv.	Insecta

- (A) a-iv, b-ii, c-i, d-iii  
 (B) a-iii, b-i, c-iv, d-ii  
 (C) a-iii, b-ii, c-iv, d-i  
 (D) a-iv, b-iii, c-ii, d-i

[NEET P-II 2016]



44. Match the following.

	List - I		List - II
i.	Order	a.	<i>Nigrum</i>
ii.	Species	b.	Polemoniales
iii.	Family	c.	<i>Solanum</i>
iv.	Class	d.	Solanaceae
		e.	Dicotyledonae

[TS EAMCET 2018]

The correct answer is

- (A) i – b, ii – a, iii – c, iv – e
- (B) i – c, ii – e, iii – d, iv – b
- (C) i – b, ii – a, iii – d, iv – e
- (D) i – a, ii – c, iii – e, iv – b

45. Identify the 'order' from the following.

[KCET 2017]

- (A) Carnivora
- (B) Muscidae
- (C) Insecta
- (D) Panthera

46. Find the odd one out.

- (A) Primata
- (B) Diptera
- (C) Sapindales
- (D) Poaceae

47. Select the incorrect statement from the following.

- (A) *Mangifera*, *Solanum* and *Panthera* represent generic epithets.
- (B) *Petunia* and *Datura* belong to family Solanaceae.
- (C) *leo*, *aestivum* and *musca* represent specific epithets.
- (D) Mango belongs to order sapindales.

48. **Assertion:** An order may have many classes.

**Reason:** All the classes of an order have common features.

- (A) Both assertion and reason are true and reason is the correct explanation of assertion.
- (B) Both assertion and reason are true but reason is not the correct explanation of assertion.
- (C) Assertion is true but reason is false.
- (D) Both assertion and reason are false.

49. Which of the following 'suffixes' used for units of classification in plants indicates a taxonomic category of 'family'?

[NCERT Exemplar]

- (A) – ales
- (B) – onae
- (C) – aceae
- (D) – ae

50. The taxonomic unit 'Phylum' in the classification of animals is equivalent to which hierarchical level in classification of plants?

[NCERT Exemplar]

- (A) Class
- (B) Order
- (C) Division
- (D) Family

51. **Assertion:** The system of providing a scientific name to any organism is called binomial nomenclature.

**Reason:** Each taxonomic group should have two names.

- (A) Both assertion and reason are true and reason is the correct explanation of assertion.
- (B) Both assertion and reason are true but reason is not the correct explanation of assertion.
- (C) Assertion is true but reason is false.
- (D) Both assertion and reason are false.

#### 1.4 Taxonomical Aids

52. One of the most important functions of botanical gardens is that [CBSE PMT 2005]

- (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 wild life

53. Kew, London is famous for

[Wardha 2001]

- (A) Being the largest biological reserve
- (B) Herbarium
- (C) Being the largest botanical garden
- (D) Diverse flora and fauna

54. Botanical gardens and zoological parks have

[NCERT Exemplar]

- (A) collection of endemic living species only
- (B) collection of exotic living species only
- (C) collection of endemic and exotic living species
- (D) collection of only local plants and animals.

55. A place where wild animals are kept in specially created environment is known as

- (A) zoological park
- (B) botanical garden
- (C) herbarium
- (D) all of these

56. A zoological garden has all of the following characteristics, except

- (A) wild animals are under human care.
- (B) wild animals are provided conditions similar to their natural habitat.
- (C) it enables us to understand the skeletons and integumentary systems of wild animals.
- (D) it enables us to know about the food habits and behaviour of wild animals.





### Answers to MCQs

1. (B) 2. (B) 3. (D) 4. (C) 5. (B) 6. (A) 7. (A) 8. (B) 9. (D) 10. (D)  
 11. (D) 12. (A) 13. (D) 14. (C) 15. (C) 16. (C) 17. (A) 18. (D) 19. (C) 20. (A)  
 21. (C) 22. (D) 23. (C) 24. (A) 25. (D) 26. (A) 27. (D) 28. (D) 29. (D) 30. (A)  
 31. (A) 32. (C) 33. (B) 34. (C) 35. (B) 36. (A) 37. (B) 38. (C) 39. (B) 40. (C)  
 41. (C) 42. (C) 43. (B) 44. (C) 45. (A) 46. (D) 47. (C) 48. (D) 49. (C) 50. (C)  
 51. (C) 52. (C) 53. (C) 54. (C) 55. (A) 56. (C) 57. (C) 58. (C) 59. (A) 60. (B)  
 61. (C) 62. (D) 63. (D) 64. (B)



### Hints to MCQs

5. Mule is sterile.
6. In *Planaria*, true regeneration is observed, i.e., a fragmented organism regenerates the lost part of its body and develops into a new organism.  
*Amoeba* divide by binary fission.  
 Bacteria divide by binary fission, sporulation, transformation, conjugation and transduction.  
 Viruses do not have cells which divide.  
 New viruses assemble in the infected host cell and the host cell divides.
9. Fungi reproduce asexually and multiply through asexual spores.  
 Yeast reproduce through budding.  
*Amoeba* reproduce through binary fission.  
 Protonema of Mosses multiply by fragmentation.
14. As new organisms are identified, they are classified according to binomial nomenclature.
17. The main purpose of classification is to reveal the varying degrees of resemblances and differences among organisms and hence establish relationships.
18. Classification helps in understanding diverse varieties of organisms and also gives an idea about the origin and evolution of organisms which are morphologically similar.
23. Category is rank or level in the hierarchical classification of organisms.  
 Classification is the arrangement of organisms or groups of organisms in distinct categories in accordance with a particular and well established plan.  
 Taxonomy is the branch of biology which deals with the collection, identification, nomenclature, description and classification of plants and animals.
29. Taxon is a group of organisms of any rank or category. A taxon may be a very large group such as division or very small as species. Taxon may range from Plantae to Angiosperms or it may be a very small group such as species e.g. *Hibiscus esculentus*.
32. Category is a rank or level in the hierarchical classification of organisms. Angiospermae is a division.
37. Family Felidae and Canidae are two different families that belong to the order Carnivora and Phylum Chordata.
40. Dogs belong to the family Canidae and Cats belong to the family Felidae.
41. Cat belongs to family Felidae and dog belongs to Family Canidae.
42. *Mango - Mangifera indica*
45. Insecta – Class  
 Muscidae – Family  
 Panthera – Genera
46. Poaceae is a category of family; rest all are from order.
47. *Musca* is generic epithet. *Musca domestica* is biological name of housefly.
48. Order is a category used in the classification of organisms that consists of one or several similar or closely related families.  
 Class includes related orders.
49. – ales suffix is used for order.  
 – ae suffix is used for class.  
 – onae is not used for any taxon.
58. A museum has collection of dead remains of plants and animals in preserved form for study and reference.
62. Monographs provide information on any one taxon.



## Topic Test

- The first step in taxonomy is \_\_\_\_\_ of an organism.  
(A) identification  
(B) nomenclature  
(C) classification  
(D) description
- Which of the following statement/s is / are true?  
i. Growth cannot be taken as a defining property of living organisms.  
ii. *Panthera pardus* is a scientific name of Leopard in which *Panthera* represents specific epithet.  
iii. In binomial nomenclature, biological names are derived from Latin irrespective of their origin.  
iv. In plants, Orders with few similar characters are assigned to Division.  
(A) All are true  
(B) Only i and iii are true  
(C) Only i and iv are true  
(D) Only ii and iii are true
- Match the columns and select the correct option:
 

	Column I		Column II
a.	Carolus Linnaeus	1.	Kingdom Plantae
b.	<i>Solanum tuberosum</i>	2.	Identification
c.	Manuals	3.	<i>Planaria</i>
d.	Regeneration	4.	<i>Amoeba</i>
		5.	Systema Naturae

  
 (A) a - 2, b - 5, c - 1, d - 4  
 (B) a - 5, b - 4, c - 2, d - 3  
 (C) a - 2, b - 3, c - 1, d - 4  
 (D) a - 5, b - 1, c - 2, d - 3
- Which of the following statements represents the defining property of living organisms?  
(A) Worker bees are sterile.  
(B) Plants respond to external factors such as light, temperature, water etc.  
(C) Sand mounds grow due to accumulation of matter from outside.  
(D) All the above.
- In binomial nomenclature, name of an animal consists of \_\_\_\_\_.  
(A) three epithets (B) two epithets  
(C) one epithet (D) four epithets
- Assertion:** Key is analytical in nature.  
**Reason:** Key represents the choice made between two opposite options in which one is selected and other is rejected.  
(A) Both assertion and reason are true and reason is the correct explanation of assertion.  
(B) Both assertion and reason are true but reason is not the correct explanation of assertion.  
(C) Assertion is true but reason is false.  
(D) Both assertion and reason are false.
- \_\_\_\_\_ is the descending arrangement of categories.  
(A) Hierarchy (B) Systematics  
(C) Key (D) Classification
- National Botanical Research Institute is situated at  
(A) England (B) Lucknow  
(C) Kolkata (D) Karnataka
- While writing the biological name of tiger, both the words should be  
(A) separately underlined  
(B) italicised  
(C) without any space between them  
(D) in capital letters

- Which of the following number represents incorrect classification of organism?

No.	Common name	Phylum / Division	Class	Genus	Species
1.	Mango	Angiospermae	Dicotyledonae	<i>Mangifera</i>	<i>indicus</i>
2.	Man	Chordata	Mammalia	<i>Homo</i>	<i>sapiens</i>
3.	Wheat	Angiospermae	Poales	<i>Triticum</i>	<i>aestivum</i>
4.	Housefly	Arthropoda	Insecta	<i>Musca</i>	<i>pardus</i>

- (A) 1, 2 and 3 (B) 1 and 4 (C) 1, 3 and 4 (D) only 2



## Answers to Topic Test

1. (A) 2. (B) 3. (D) 4. (B) 5. (B) 6. (A) 7. (A) 8. (B) 9. (A) 10. (C)

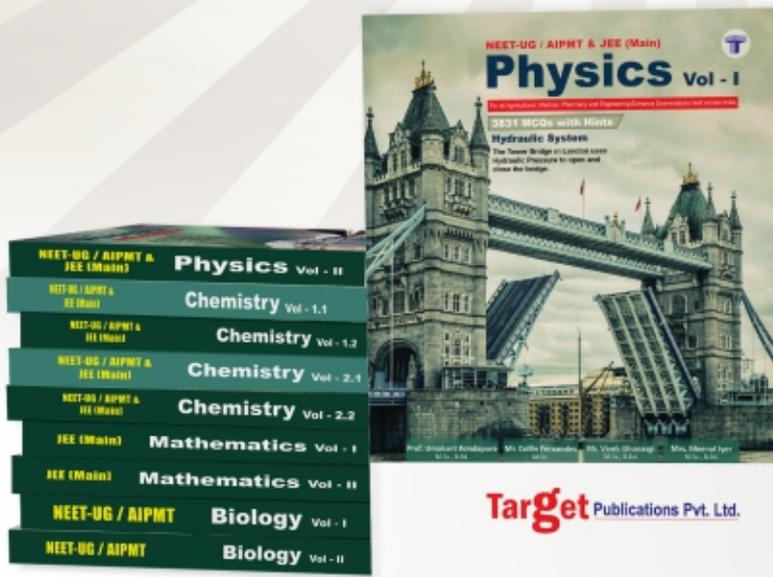


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