

BIOLOGY

BOOKS - KUMAR PRAKASHAN KENDRA BIOLOGY (GUJRATI ENGLISH)

THE LIVING WORLD

Section A Exam Oriented Questions Answers
From Darpan

1. Where are living organisms found?



2. What do they teach us?



3. Which two questions develop regarding the living organisms?



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4. How can we identify living things?



5. What are the important characteristics of living organisms?



6. Describe 'Growth' as an characteristic of living organism.

7. Describe reproduction in living organisms.



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8. What is metabolism? Can metabolism considered as a defining characteristic of living organism?



9. How consciousness become the defining property of living organisms?



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10. Do you consider a person in coma, living or dead?



11. In which conditions it become difficult to define human beings as living?



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12. Describe hierarchy of organisation in living organisms?



13. Biology is the story of life on the earth. Justify the statement.



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14. Explain the three important levels of biodiversity.



15. Why nomenclature is essential? How it is done for living organisms?



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16. What is Scientific name? Describe.



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17. Describe Binomial Nomenclature and what is its advantage?



18. What is classification and what is its advantages?



19. What are the rules of binomial nomenclature?



20. Explain the term Taxa, Taxonomy and systematics.



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21. Write short note on taxonomic categories.



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22. Describe various categories of taxonomical studies





23. Write short note on species with suitable examples.



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24. Genus: Describe Genus with example.



25. Definitions/Explanation: Family: **Watch Video Solution** 26. Order: Describe/Explain Order. **Watch Video Solution** 27. Class: What is Class?



28. Phylum: Explain Phylum.



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29. Kingdom: What is Kingdom?



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30. With the flow chart describe the hierarchial arrangement of Taxonomic categories ?



31. What are taxonomical aids?



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32. Write short note on Herbarium.



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33. Write short note on Botanical Gardens.



34. Write a explanatory note on Museum.



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35. What are Zoological Parks?



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36. Describe Key as taxonomical aid.



37. Describe other means of recording descriptions.

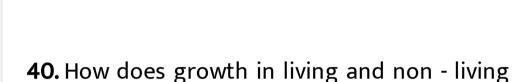


38. What is the unique features of living organism?



39. What is the characteristics of growth?

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different?

41. In single celled organisms growth or reproduction occurs through



42. Describe reproduction in living organisms.



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43. What are metabolic processes? State its importance.



44. Metabolism is a defining feature of all living organisms without exception. Isolated metabolic reaction in vitro are not living things but surely living reactions, comment.



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45. Living organisms respond to which factors?



46. What is the effect of photo period on living organisms?



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47. How many species are known till today?



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48. What does biological diversity means?



49. Why there is a need of proper system of classification and nomenclature?



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50. What is indentification and what is its aim?



51. How are scientific names of plant and animal assigned?



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52. What is the importance of scientfic name?



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53. Who developed binomial nomenclature?



54. Give the scientific name of mango.



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55. What are the basis of modern taxonomic studies?



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56. What are the scope of systematics?



57. With the flow chart describe the hierarchial arrangement of Taxonomic categories ?



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58. Write short note on taxonomic categories.



59. How to place an organisms in various categories?



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60. Why is the problem of classification more complex?



61. State the taxonomic categories of Man, Housefly, Mango and Wheat state the use of taxonomic studies.



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62. What is the prime source of taxonomic studies?



63. What does the lable of herbaria sheets contain?



64. Name the botanical garden located in India.



65. How are insects preserved?



66. What is the aim of zoological parks?



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67. What are manuals and monograph?



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Section B Difference Scientific Reasons

1. Give differences:

Anabolism and Catabolism



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2. Give differences:

Taxonomy and Systematics



3. Give differences:

Herbarium and Museum



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4. Give differences:

Botanical garden and Zoological park



5. Give scientific reasons:

Non living things also grow.



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6. Give scientific reasons:

Reproduction cannot be the defining characteristic of living organisms.



7. Give scientific reasons:

All the organisms are not yet identified on the earth.



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8. Give scientific reasons:

There is a need to standardize the name of living organisms.



9. Give scientific reasons:

Classification is essential for understanding inter-relation among living organisms.



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10. Give scientific reasons :

Zoological parks fulfil to achieve many objectives.



Section C Definition Explanation Terms Importance

1. Definitions/Explanation:

Variations:



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2. Definitions/Explanation:

Nomenclature:



3. Give the scientific name of mango. **Watch Video Solution** 4. Definitions/Explanation: **Biodiversity: Watch Video Solution** 5. Definitions/Explanation: **Entropy:**



6. Definitions/Explanation:

Metabolism:



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7. Definitions/Explanation:

Genus:



8. Definitions/Explanation: Family: **Watch Video Solution** 9. Importance: Museums: **Watch Video Solution** 10. Write short note on Herbarium.

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Section D Textual Exercise

1. Why are living organisms classified?



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2. Assertion: — Classification systems are changing overynow and then.

Reason: — Over time, criteria for classification changed.



3. What different criteria would you choose to classify people that you meet often?



4. What do we learn from identification of individuals and populations?



5. Give the scientific name of mango.



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6. Define a taxon. Give some examples of taxa at different hierarchical levels.



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7. Can you identify the correct sequence of taxonomical categories?

(a) Species ightarrow Order ightarrow Phylum ightarrow

Kingdom

(b) Genus ightarrow Species ightarrow Order ightarrow

Kingdom

(c) Species ightarrow Genus ightarrow Order ightarrow Phylum



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8. Try to collect all the currently accepted meanings for the word 'Species'. Discuss with your teacher the meaning of species in case of higher plants and animals on one hand, and bacteria on the other hand.



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9. Define and understand explain the following terms :

(i) Phylum (ii) Class (iii) Family

(iv) Order (v) Genus



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10. Taxonomic key is one of the taxonomic tools in the identification and classification of plants and animals. It is used in the preparation of



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11. Illustrate the taxonomical hierarchy with suitable examples of a plant and an animal.



Section E Solution Of Ncert Exemplar Multiple Choice Questions Mcqs

1. As we go from species to kingdom in a taxonomic hierarchy, the number of common characteristics

(A) will decrease

(B) will increase

(C) remain same

(D) may increase or decrease

A. will decrease

B. will increase

C. remain same

D. may increase or decrease

Answer: A



- **2.** Which of the following 'suffixes' used for units of classification in plants indicates a taxonomic category of 'Family'?
- (A) Ales
- (B) Onae

(C) Aceae

(D) Ae

A. – Ales

B. — Onae

C. – Aceae

D. — Ae

Answer: C



- 3. The term 'systematics' refers to
- (A) identification and study of organ systems
- (B) identification and preservation of plants and animals
- (C) diversity of kinds of organisms and their relationship
- (D) study of habitats of organisms and their classification

A. identification and study of organ systems

B. identification and preservation of plants and animals

C. diversity of kinds of organisms and their relationship

D. study of habitats of organisms and their classification

Answer: C



- **4.** Genus represents
- (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 the above
 - 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 the above

Answer: C



- **5.** The taxonomic unit "Phylum in the classification of animals is equivalent to which hierarchial level in classification of plants.
- (A) Class
- (B) Order

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

Answer: C



6. Botanical gardens and Zoological parks have

(A) collection of endemic living species only(B) collection of exotic living species only(C) collection of endemic and exotic living

(D) collection of only local plants and animals

species

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

Answer: C



7. Taxonomic key is one of the taxonomic tools in the identification and classification of plants and animals. It is used in the preparation of

- A. Monographs
- B. Flora
- C. Both (A) and (B)
- D. None of these

Answer: C



- 8. All living organisms are linked to one another because
- (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 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

Answer: B



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- **9.** Which of the following is a defining characteristic of living organisms?
- (A) Growth
- (B) Ability to make sound
- (C) Reproduction
- (D) Response to external stimuli

A. Growth

- B. Ability to make sound
- C. Reproduction
- D. Response to external stimuli

Answer: D



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10. Match the following and choose the correct option.

Column-I		Column-II	
(a)	Family	(1)	Tuberosum
(b)	Kingdom	(2)	Polymoniales
(c)	Order	(3)	Solanum
(d)	Species	(4)	Plantae
(e)	Genus	(5)	Solanaceae

Answer: B



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Section E Solution Of Ncert Exemplar Very Short Answer Type Questions Vsqs

1. Linnaeus is considered as Father of Taxonomy. Name two other botanists known

for their contribution to the field of plant taxonomy.



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2. What does ICZN stand for?



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3. Couplet in taxonomic key means....



4. What is a monograph?



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5. Amoeba multiplies by mitotic cell division. Is this phenomena growth or reproduction ? Explain.



6. Definitions/Explanation:

Metabolism:



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7. Which is the largest botanical garden in the world? Name a few well known Botanical gardens in India.



Section E Solution Of Ncert Exemplar Short Answer Type Questions

1. A ball of snow when rolled over snow increases in mass, volume and size. Is this comparable to growth as seen in living organisms? Why?



2. In a given habitat we have 20 plant species and 20 animal species. Should we call this as

'diversity or biodiversity' ? Justify your answer.



3. International Code of Botanical Nomenclature [ICBN) has provided a code for classification of plants. Give hierarchy of units of classification, botanists follow while classifying plants and mention different 'suffixes' used for the units.



4. A plant species shows several morphological variations in response to altitudinal gradient. When grown under similar conditions of growth, the morphological variations disappear and all the variants have common morphology. What are these variants called?



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5. How do you prepare your own herbarium sheets? What are the different tools you carry with you while collecting plants for the

preparation of a herbarium ? What information should a preserved plant material the herbarium sheet provide for on taxonomical studies?



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6. What is the difference between flora, fauna and vegetation? Eichhorina crassipes is called as an exotic species while Rauwolfia Serpentine is an endemic species in India. What do these terms exotic and endemic refer to?



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7. A plant may have different names in different regions or the country of world. How do botanists solve this problem?



8. Brinjal and potato belong to the same genus Solanum, but to two different species. What defines them as separate species?



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9. Properties of cell organelles are not always found in the molecular constituents of cell organelles. Justify.



10. The number and kinds of organism is not constant. How do you explain this statement?



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Section E Solution Of Ncert Exemplar Long Answer Type Questions

1. What is meant by living ? Give any four defining features of life forms.



2. A scientist has come across a plant, which he feels is a new species. How will he go about its identification, classification and nomenclature?



- 3. Brassica Campestris Linn
- (a) Give the common name of the plant,
- (b) What do the first two parts of the name denote?

(c) Why are they written in italics?

(d) What is the meaning of Linn written at the end of the name?



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4. What are taxonomical aids? Give the importance of herbaria and Museums. How are botanical garden and Zoological parks useful in conserving biodiversity?



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5. Define a taxon. What is meant by taxonomic hierarchy? Give a flow diagram from the lowest to highest category for a plant and an animal. What happens to the number of individuals and numbers of shared characters as we go up the taxonomical hierarchy?



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6. A student of taxonomy was puzzled when told by his professor to look for a key to identify a plant. He went to his friend to clarify

what 'Key' the professor was referring to ?
What would the friend explain to him?



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7. Metabolism is a defining feature of all living organisms without exception. Isolated metabolic reaction in vitro are not living things but surely living reactions, comment.



8. Do you consider a person in coma, living or dead?



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9. What is the similarity and dissimilarity between 'whole moong dal' and 'broken moong dal' in terms of respiration and growth? Based on these parameters classify them into living or non - living?



10. Some of the properties of tissues are not the constituents of its cells. Give three examples to support the statement.



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Question From Module Important Mcq For Neet

- 1. Name the order of housefly.
- (A) Diptera

- (B) Poaceals
- (C) sepideales



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Question From Module Questions Paper

1. What are the important characteristics of living organisms?



2. What is regeneration?

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3. What is difference between nomenclature and identification ?



4. Give the meaning of 'Systema' word.



5. Mention the species of solanum.



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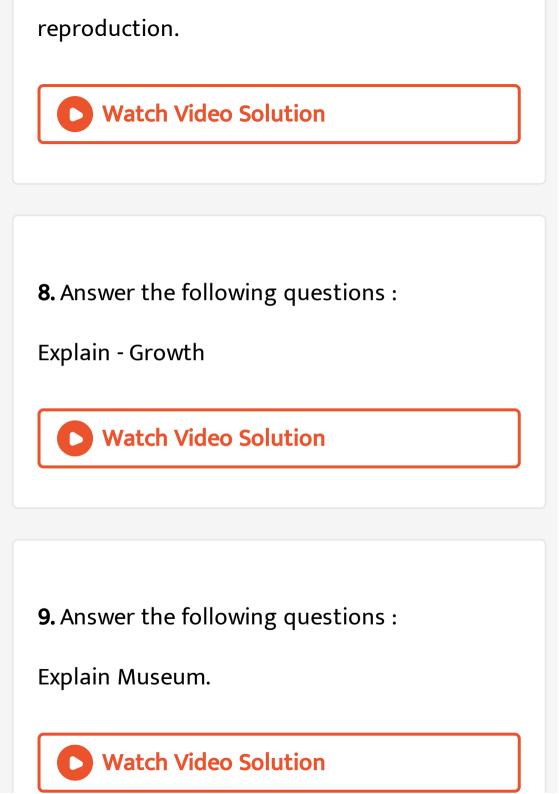
6. Family: Write short note on 'Family'.



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7. Answer briefly:

Explain with example types of asexual



Objective Section Multiple Choice Questions Mcqs

- 1. Which one is defining feature of life forms?
- (A) Reproduction
- (B) Consciousness
- (C) Cellular organisation of body
- (D) Both (B) and (C)
 - A. Reproduction
 - **B.** Consciousness

- C. Cellular organisation of body
- D. Both (B) and (C)

Answer: D



- **2.** Give the scientific name of mango.
 - A. Mangifera Indica
 - B. Mangifera Indica
 - C. Mangifera indica

D. Mangifera indica

Answer: D



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- 3. Each scientific name has
- (A) 2 component
- (B) 1 component
- (C) 3 component
- (D) 4 component

A. 2 component

- B. 1 component
- C. 3 component
- D. 4 component

Answer: A



- **4.** The word systematics is derived from
- (A) Greek word
- (B) Latin word

- (C) English word
- (D) Indian word
 - A. Greek word
 - B. Latin word
 - C. English word
 - D. Indian word

Answer: B



5. Which processes are basic to taxonomy

(A) Characterisation

(B) Identification

(C) Classification

(D) All of these

A. Characterisation

B. Identification

C. Classification

D. All of these

Answer: D

- 6. Potato and brinjal belongs to
- (A) same species
- (B) same genus
- (C) Same family
- (D) Both (B) and (C)
 - A. same species
 - B. same genus
 - C. Same family

D. Both (B) and (C)

Answer: D



- **7.** What is common in lion, leopard and tiger ?
- (A) All belong to same species
- (B) All belong to same genus Felidae
- (C) All belongs to same genus panthera
- (D) None of these

- A. All belong to same species
- B. All belong to same genus Felidae
- C. All belongs to same genus panthera
- D. None of these

Answer: C



- 8. What is common in lion and cats?
 - A. Both belong to same genus Felidae

- B. Both belong to same genus panthera
- C. Both belong to same species
- D. Both belong to same family Felidae

Answer: D



- **9.** Which two families are included into carnivora?
- (A) Panthera and canidae
- (B) Felidae and Canidae

- (C) Canidae and amphibians
- (D) Canidae and Ratteae
 - A. Panthera and canidae
 - B. Felidae and Canidae
 - C. Canidae and amphibians
 - D. Canidae and Ratteae

Answer: B



10. Family of Mango is

(A) Poaceal

(B) Anacardiaceae

(C) Muscidae

(D) None of these

A. Poaceal

B. Anacardiaceae

C. Muscidae

D. None of these

Answer: B

- 11. Indian Botanical garden is located at
- (A) Lucknow
- (B) Nagpur
- (C) Howrah
- (D) Dehradun
 - A. Lucknow
 - B. Nagpur
 - C. Howrah

D. Dehradun

Answer: C



- **12.** Which refers to quick referral systems in taxonomical studies ?
- (A) Botanical garden
- (B) Herbarium
- (C) Zoological park
- (D) Museums

- A. Botanical garden
- B. Herbarium
- C. Zoological park
- D. Museums

Answer: B



- **13.** Which are generally analytical in nature in taxonomy?
- (A) Museums

- (B) Key
- (C) Botanical gardens
- (D) Zoological parks
 - A. Museums
 - B. Key
 - C. Botanical gardens
 - D. Zoological parks

Answer: B



14. Plant species in Botanical garden are grown for

- A. Identification purpose
- B. Ornamental purpose only
- C. Commercial purpose
- D. None of these

Answer: A



15. In case of plants, classes with few similar characters are assigned to

- A. lower category called division
- B. higher category called division
- C. higher category called order
- D. higher category called phylum

Answer: B



Objective Section Assertion Reasoning Type Questions

1. A: Linnaeus insisted that scientific names should be latinized

R: This gives beauty to the names.

A. A and R both are correct and R is correct explanation of A.

B. A and R are correct but R is not explanation of A.

C. A is correct and R is false.

D. A and R are false

Answer: C



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2. A: Hierarchial system of classification is useful in that it reduces the volume of description in a catalogue of animals and plants.

R : Characters given for a larger category (say a phylum) need not be repeated for smaller

- categories (say classes, orders etc.)
- (A) A and R both are correct and R is correct explanation of A.
- (B) A and R are correct but R is not explanation of A.
- (C) A is correct and R is false.
- (D) A and R are false
 - A. A and R both are correct and R is correct
 - explanation of A.

explanation of A.

B. A and R are correct but R is not

C. A is correct and R is false.

D. A and R are false

Answer: A



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3. A : Phylogenetic and natural classifications are similar.

R: The organisms related evolutionarily are usually similar morphologically also

A. A and R both are correct and R is correct explanation of A.

B. A and R are correct but R is not explanation of A.

C. A is correct and R is false.

D. A and R are false

Answer: A



Objective Section Analogy Type Questions

1. Lion: Panthera leo:: leopard:



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2. ICBN : Plants :: ICZN :



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3. Genus: 1 big letter:: specific epithet:

4. Nomenclature : carolus linnaeus :: new

classification:



5. Scientific name of Mango: Mangifera indica

:: wheat :



6. Cat : Felidae :: Dog :



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7. Yeast and Hydra: Budding:: planaria:



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Objective Section Pick Up The Correct Option

1. Pick up the correct option

Keys are based on similar/contrasting

characters. **Watch Video Solution** 2. In case of plants, classes with few similar characters are assigned to **Watch Video Solution**

3. Mules are fertile/sterile animals.



4. In living organisms growth is from inside/outside.



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5. Scientific names are of Greek origin.



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6. Assertion: — Binomial system of naming is being practised by biologists all over the

world

Reason: — This naming system using a two word format was found convenient



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Objective Section True Or False

1. Biology is the story of life on the earth. Justify the statement.



2. How consciousness become the defining property of living organisms?



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3. Scientific names are of Greek origin.



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4. What are basics of taxonomy?



5. Each rank in taxonomic categories represents of classification.



- **6.** What is common in lion, leopard and tiger
- (A) All belong to same species
- (B) All belong to same genus Felidae
- (C) All belongs to same genus panthera
- (D) None of these

7. Define a taxon. What is meant by taxonomic hierarchy? Give a flow diagram from the lowest to highest category for a plant and an animal. What happens to the number of individuals and numbers of shared characters as we go up the taxonomical hierarchy?



- **8.** Which refers to quick referral systems in taxonomical studies?
- (A) Botanical garden
- (B) Herbarium
- (C) Zoological park
- (D) Museums



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Objective Section Fill In Blanks

1. A is a collection of pressed, dried and preserved plants mounted on



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2. Plant families like are included in order

•••••



3. Systematics takes into accountbetween organisms.



4. Children love visiting these parks, commonly called





5. Floria contains the actual account of and of plants of given area.



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6. Monographs contain information on any taxon.

..... taxon.



7. What does the lable of herbaria sheets contain?



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8. Identification of organisms requires and



9. Each rank in taxonomic categories represents of classification.

